Asbestos-Containing Material Re-Inspection Report

WA032 PFC JOE E. MANN UNITED STATES ARMY RESERVE CENTER Site Code 53920

4415 North Market Street Spokane, Washington 99207

Prepared for:

88th Regional Support Command

60 South O Street Ft. McCoy, Wisconsin 54656

Submitted by:



U.S. Army Corps of Engineers Louisville District

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March 2014

EXECUTIVE SUMMARY

The US Army Corps of Engineers (USACE) conducted an Asbestos-Containing Material (ACM) Re-Inspection at the PFC Joe E. Mann United States Army Reserve Center (WA032), in Spokane, Washington on 22 January 2013. The work was conducted for the U.S. Army Reserve 88th Regional Support Command. The re-inspection was performed to confirm the results of an ACM inspection performed by others in April 1994 and March 2003 to identify any potential ACM not identified previously in the initial inspection and identify damaged friable ACMs.

Two structures were inspected. These included:

Building #1 – Administration Building

Building #2 - Area Maintenance Support Activity (AMSA) Shop

Homogeneous Areas

Fifteen homogenous areas (HAs) were identified during the 1994 inspection, thirty-one additional HAs were identified in the 2003 inspection. One new HAs was identified during the re-inspection. Subsequent to the re-inspection additional vandalism resulted in the identification of one additional homogeneous area by the 88th RSC. The identified HAs include:

1994 Inspection

- White acoustical ceiling tile
- White-brown floor tile
- Brown-red cove base
- Black cove base
- Green cove base
- Brown floor tile
- Black floor tile
- Off-white floor tile
- Floor soundproofing
- Boiler room gasket
- Electrical switchbox insulation
- Assembly hall thermal pipe insulation
- Wallboard/Lath and Plaster Walls

- Roof
- Insulated Metal Doors

2003 Inspection

- Pink Tile and Mastic
- Cream, Tan Tile and Mastic
- Glue Dots
- Ceiling Tile
- Tan/Brown 12x12 Tile/Mastic
- 2'x4' Ceiling Panels
- Dark Brown Cove Base Mastic
- Brown/Tan 12x12 Tile and Mastic
- Vibration Damper
- Dark Brown Cove Base Mastic (Kitchen)
- Dark Brown Cove Base Mastic (Training Room)
- Dark Brown Cove Base Mastic (Assembly Hall)
- Red Quarry Tile
- Paneling Mastic
- Glazing
- Gypsum Wall Board (GWB) & Joint Compound (Training Room)
- GWB & Joint Compound (Administration Area)
- GWB & Joint Compound (Medical Area)
- Vibration Damper
- Black Caulking
- Gray Caulking
- Interior White Insulation
- Dark Gray Grout
- Tile Adhesive
- Slip Sheet between Floors
- Glazing (2nd floor men's restroom)
- Pipe Insulation (Maintenance Building)
- GWB & Joint Compound (Motor Pool Oil Storage Area)
- GWB & Joint Compound (Motor Pool Battery Storage Area)

- Off-white 12x12 Tile
- Pipe Insulation (Boiler Room)

2014 Re-Inspection

- Wall Sound Proofing Insulation (Medical Area)
- Thermal System Insulation on steam pipes (identified post inspection visit)

ACMs

As a result of the 1994 inspection, three HAs were positively identified as ACM. The 2003 inspection identified seven ACMs. The 2003 inspection indicated that some of the assumed ACMs identified in the 1994 inspection had been abated and a 2012 memorandum from the 88th RSC indicated that an ACM identified in the 2003 inspection was abated, if the ACM was abated, this will be indicated in parentheses below. Based on the 2014 re-inspection observations and on the sample analytical results, USACE did identify one additional assumed ACM. The ACMs include:

1994 Inspection

- Brown 9"x9"Floor Tile and Mastic, throughout first floor
- Black 12"x12" Floor Tile and Mastic in medical x-ray and exam rooms
- Off-white 12"x12" Floor Tile and Mastic in medical area

2003 Inspection

- Mastic for pink tile in Chaplin's Office
- Glue Dots associated with ceiling tiles in medical wing
- Mastic associated with 12x12 Tan/Brown floor tile in the administration area
- Vibration Damper in equipment room (ABATED per 2012 MFR)
- Dark Brown Cove Base Mastic in Training Room
- Dark Brown Cove Base Mastic in Assembly Hall
- Vibration Damper in Assembly Hall (ABATED per 2012 MFR)

2014 Re-inspection

None

Assumed ACM. The following HAs were assumed to contain asbestos:

1994 Inspection

- Thermal Pipe Insulation in Assembly Hall (ABATED per 2003 Inspection)
- White 12"x12" Floor Tile with Tan Mastic
- Floor Soundproofing
- Boiler Room Gasket
- Electrical Box Insulation
- Insulated Metal Doors

• Roof

2003 Inspection

• Pipe Insulation within walls

2014 Re-inspection

• White Air Cell Type Thermal System Insulation

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ACRONYMS AND ABBREVIATIONS

ACBM asbestos-containing building material

ACM asbestos-containing material

AHERA Asbestos Hazard and Emergency Response Act of 1986

GWB Gypsum Wall Board HA homogeneous area

NESHAP National Emissions Standards for Hazardous Air Pollutants

PLM polarized light microscopy

RSC Regional Support Command

TSI Thermal System Insulation

USACE United States Army Corps of Engineers

USARC United States Army Reserve Center

USEPA United States Environmental Protection Agency

1.0 INTRODUCTION

The US Army Corps of Engineers, Louisville District (USACE) has conducted an Asbestos-Containing Material (ACM) Re-Inspection at the PFC Joe E. Mann U.S. Army Reserve Center (USARC), facility number WA032, at 4415 North Market Street in Spokane, Washington (Site). The re-inspection was performed for the 88th Regional Support Command (RSC) for the purposes of environmental compliance and planning in preparation for real estate actions. The work was conducted to confirm the results of an ACM inspection performed by others in April 1994 and April 2003 at the Site and to identify any potential ACM not identified previously in the initial inspections and to document any changes in condition of previously identified ACM. Since completion of the previous inspections the site has been vacated and vandals have extensively damaged the interior of the building. This re-inspection paid particular attention to areas of vandalism to determine if materials, not previously assessed, had been exposed or damaged. Previous asbestos inspections for the site provided by the 88th RSC are included in Appendix A.

2.0 APPROACH

The following tasks were performed to meet the objectives of the project:

- Asbestos Inspection USACE personnel inspected all interior and exterior building areas at the Site. The buildings inspected consisted of the following:
 - Building #1 Administration Building
 - Building #2 Area Maintenance Support Activity (AMSA) Shop
- Suspect Asbestos-Containing Building Material (ACBM) Sampling For suspect ACBM not previously identified, the USACE collected bulk samples of the suspect material and submitted for laboratory analysis.

A photographic record of the areas inspected and/or sampled was maintained. The Photographic Log and photos, if applicable, are included in Appendix B. No new photographs are presented within this report if no new HAs were identified during the re-inspection survey and existing HAs demonstrated no material change in condition.

2.1 Information Sources

All documents provided by the 88^h RSC for the Site and reviewed as part of this project are attached as Appendix A. Additionally, the Point(s) of Contact who enabled Site access to the USACE inspector provided information where applicable.

2.2 Limitations

Although this study attempts to confirm the presence of ACM, either previously identified or unidentified, it is possible that some area(s) of ACM escaped detection due to the limitations of

the study, the inaccuracy of available data sources, location inaccessibility, and/or the limited knowledge of Site personnel.

3.0 SITE INFORMATION

3.1 Installation Name and Location

Facility ID: WA032 – PFC Joe E. Mann United States Army Reserve Center

Facility Address: 4415 North Market Street, Spokane, Washington 99207

3.2 Facility Manager/Point of Contacts

BRAC Environmental Coordinator

Name: Meline Skeldon Phone: 206-370-2207

Email: meline.e.skeldon2.ctr@us.army.mil

3.3 Inspector Contact Information

Inspector: Craig A. Coombs

Affiliation: USACE

Address: 600 Martin Luther King Jr Place, Room 351

Louisville, Kentucky 40202

Phone: 502-315-6324 Fax: 502-315-6309

Email: craig.a.coombs@usace.army.mil

The Inspector's Certification is provided in Appendix C.

3.4 Date of Inspection

Begin Date: 22 January 2014 End Date: 22 January 2014

4.0 ASBESTOS INSPECTION

4.1 Methods

Asbestos inspection and sampling procedures (if required) were performed in accordance with the Asbestos Hazard and Emergency Response Act of 1986 (AHERA) protocols published in 40 Code of Federal Regulations Part 763 Subpart E, October 30, 1987. Sampling procedures include sample collection of each suspect asbestos homogeneous material as recommended by *A Guide to Performing Reinspections Under the Asbestos Hazard and Emergency Response Act* (USEPA 1992). Homogeneous materials were determined by conducting an initial building

walkthrough to assess materials that were visually similar in color, texture, general appearance, and date of installation. If the inspector decided that a material was not similar in appearance and texture to other materials in the building, the inspector distinguished the material as unique and, if not previously sampled, collected samples of each unique material accordingly.

Following the US Environmental Protection Agency (USEPA) inspection protocols, the inspector placed each identified suspect homogeneous material into one of the following USEPA classifications:

Friable ACM. National Emissions Standards for Hazardous Air Pollutants (NESHAP) defines a friable ACM as any material containing greater than 1 percent asbestos, which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Category I Non-friable ACM. NESHAP defines a Category I non-friable ACM as packing, gaskets, resilient floor covering (except vinyl sheet flooring products which are considered friable), and asphalt roofing products that contain greater than 1 percent asbestos.

Category II Non-friable ACM. NESHAP defines a Category II non-friable ACM as any material, except for a Category I non-friable ACM, that contains greater than 1 percent asbestos and cannot be reduced to a powder by hand pressure when dry.

Additionally, suspect ACM were assessed for their general condition, using the terms "Good", "Damaged", or "Significantly Damaged". Good condition is defined as a material that is not damaged and/or largely intact. Damaged is defined as a material that is less than 25 percent localized damage or less than 10% distributed damage. Significantly Damaged is defined as any material that is greater than 25 percent damaged or greater than 10% distributed damage.

The inspector estimated the quantity of suspect ACM using visual estimation, for previously identified suspect materials the previous inspection was used as the source for the quantity. This visual estimation was conducted using facility drawings (provided by the 88th RSC or Site personnel), pacing, counting tiles, and panels, rather than measured take-offs. As a result, actual quantities may differ between visually estimated values and physical measurements. Estimated quantities for each building are summarized in the Bulk Sample Log of Table 1, Appendix D. This summarizes all samples collected during this and all previous inspections.

If new HAs were identified that required sampling¹, bulk samples of suspect homogeneous ACM were collected to ensure that each distinct layer of material, if multiple layers were present, was represented in the sample. The inspector applied a wetting agent to friable surfaces before sample collection to reduce the potential for a fiber release. Upon collection, each sample collected was immediately placed in an individual plastic bag which was then sealed and labeled with a unique sample identification number. After sample collection, the sampling instruments were wiped clean using a wet, lint-free cloth to prevent cross-contamination

¹ Sampling was not conducted on ACMs identified during the original Inspection Survey.

between samples. The completed Functional Space and Homogeneous Area Forms are included in Appendix E, if applicable.

All samples remained in the inspector's custody until they were sent to the laboratory. Upon completion of the sampling activities, the bulk samples were delivered by the inspector to McCall and Spero Environmental, Inc at 1831 Williamson Court, Louisville, KY 40223 for analysis by EPA Method 600/R-93/116 using PLM analysis with dispersion staining, and 600/M4-82-020, as appropriate. McCall and Spero is a National Voluntary Laboratory Accreditation Program certified laboratory, certification number 101895-0. Laboratory Bulk Asbestos Analysis Reports as well as the completed Chain-of-Custody forms are provided in Appendix F, if applicable.

4.2 Inspection Results

One new HA was identified during the re-inspection survey on 22 January 2014, three samples of this HA were collected and submitted for analysis.

The results of sampling for this survey indicated that no asbestos was contained in the material sampled.

Due to vandalism at the site and additional HA was identified subsequent to the inspection. This material, white air cell thermal system insulation, was assumed to be an ACM based on the markings on the material (Photograph 4 in Appendix B). The approximate location of this material is shown in Appendix E drawings.

Based on the previous asbestos surveys conducted in 1994, 2003, and 2014, asbestos is present in the following materials at the site:

- Brown 9"x9"Floor Tile and Mastic, throughout first floor (1994)
- Black 12"x12" floor tile and mastic in medical x-ray and exam rooms (1994)
- Off-white 12"x12" floor tile and mastic in medical area (1994)
- Mastic for pink tile in Chaplin's Office (2003)
- Glue Dots associated with ceiling tiles in medical wing (2003)
- Mastic associated with 12x12 Tan/Brown floor tile in the administration area (2003)
- Dark Brown Cove Base Mastic in Training Room (2003)
- Dark Brown Cove Base Mastic in Assembly Hall (2003)
- Air Cell Thermal System Insulation (2014)

The Bulk Sample Log including analytical results is presented in Table 1 in Appendix D.

5.0 RECOMMENDATIONS

A regular maintenance schedule is recommended that includes a visual inspection of the material condition. Removal is not necessary since they do not appear to have the potential of becoming friable during normal day-to-day activities conducted within the building(s).

Some areas of damage associated with the ACMs were identified throughout the facility. The damage to these materials was not significant and did not result in the material becoming friable. The TSI was significantly damaged and in a friable condition. All other ACMs in the building that were observed were Category I non-friable materials as defined by the USEPA, which according to the USEPA rarely become friable. With the exception of the TSI, none of the materials were observed to be in a friable condition during the inspection and did not appear to pose an unacceptable risk to human health of the environment.

ACMs are required to be removed or disposed of in accordance with Washington State Regulations prior to any demolition, renovation, or remolding that would disturb these materials. Washington State Department of Labor and Industries and Spokane Regional Clean Air Agency require that asbestos abatement be performed using Certified Asbestos Workers under the direct onsite supervision of a Certified Asbestos Supervisor. Any work done that will disturb these materials should be conducted in accordance with all Federal, State, and Local regulations.

6.0 INSPECTOR'S SIGNATURE

A comprehensive and thorough asbestos inspection was conducted on these facilities by certified and experienced USACE asbestos inspector. Every effort was made to identify all ACBM in the facility, but due to random sampling techniques mandated by EPA, the possibility always exists that some ACBM remains undetected. The information presented in the report is true and accurate to the best of my knowledge:

Craig A. Coombs

20 March 2014

Date

APPENDIX A
Previous ACM Survey Reports



A Report Prepared For

Department of the Army I Corps and Fort Lewis Directorate of Engineering and Housing

ASBESTOS SURVEY
SPOKANE U.S. ARMY RESERVE CENTER
SPOKANE, WASHINGTON
CONTRACT DACA67-93-D-1017
DELIVERY ORDER 0003

AGI Project No. 14,340.201

AGI Technologies
300 120th Avenue N.E.
Building 4, Suite 215
Bellevue, Washington 98005
206/453-8383

April 15, 1994



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1.0 INTRODUCTION

1.1 GENERAL

The U.S. Army Corps of Engineers - Seattle District (USACE) retained AGI Technologies (AGI) to perform asbestos surveys of 23 U.S. Army Reserve Centers (USARC) within the 124th Army Reserve Command (ARCOM). This work was performed under Delivery Order 0003 of USACE contract DACA67-93-D-1017 dated September 24, 1993 and August 5, 1993, respectively.

This report presents data describing the location, approximate quantities, and condition of suspected asbestos-containing materials (ACM) in Buildings R0001 and R0002 at the Spokane, Washington USARC.

1.2 PURPOSE

Army Regulation 200-1 requires the 124th ARCOM to establish and maintain a comprehensive and effective asbestos management plan, including facility-wide asbestos surveys of all USARC structures. The purpose of AGI's services was to document suspected ACM in USARC buildings. The U.S. Environmental Protection Agency (EPA) defines ACM as any material with an asbestos content of 1 percent or more by volume. The results of this survey will serve as a decision-making guide for asbestos management in USARC facilities.

1.3 SCOPE OF WORK

The facility asbestos survey included visual inspection, sampling and laboratory analysis, hazard assessment, and documentation.

The specific scope of work at each facility included:

- ▶ Coordinate facility inspections in order to minimize interference with the ARCOM's training schedule.
- ▶ Conduct building inspections to identify assumed or suspected ACM.
- ▶ Collect bulk samples during the inspections where appropriate to determine whether suspected building materials are asbestos-containing.
- Submit samples to an accredited laboratory for analysis of asbestos content.
- ▶ Prepare an ACM inventory for each building/facility.
- ▶ Provide an ACM hazard ranking and removal prioritization (hazard assessment) based on overall condition and potential for disturbance.
- ▶ Prepare computer-aided design (CAD) drawings of facility buildings to show sample locations and extent of assumed or confirmed ACM.
- ▶ Prepare and submit an asbestos survey report for each facility, including the information listed above for each building.



2.0 ASBESTOS

2.1 MINERALOGY

Asbestos is the common name for naturally occurring fibrous materials that have relatively high resistance to heat and chemical damage. Asbestos comprises certain fibrous forms of minerals that belong to two mineralogical groups: serpentine and amphibole.

The serpentine group comprises magnesium silicate minerals with a layered structure. Chrysotile, the only asbestos member of serpentine, has an altered form in which the crystalline sheet structure has been transformed into microscopic fibrous crystals. Bundles of these fibers are visible without magnification. Also known as white asbestos, chrysotile is also recognized for its binding and strengthening properties. Chrysotile accounts for most commercial applications of asbestos.

Amphiboles are silicate minerals with a double-chain structure that can produce fibrous forms. Asbestos forms of amphibole include amosite (brown asbestos), crocidolite (blue asbestos), tremolite, actinolite and anthophyllite. Iron, calcium and sodium occur along with, or in place of, magnesium in these minerals. While amphibole forms of asbestos are very durable and have exceptional thermal properties, they are more brittle (less workable) than chrysotile and are used mostly for thermal system insulation.

2.2 APPLICATIONS AND USES

Because asbestos enhances the fireproofing capabilities of certain building materials, it can be found in high-temperature environments such as furnace or boiler gaskets, blocks, and insulation, as well as pipe and vent insulation or duct connector work. Asbestos was also used in some electrical switch and breaker boxes and as a component of electrical wire insulation because of its insulating properties.

Asbestos was frequently applied to existing building structures in conjunction with other materials to increase their fire rating. Examples of this are sprayed-on fireproofing of walls and ceilings, and the addition of cement asbestos board to existing surfaces. Many textured acoustical plaster and ceiling tile products also contain asbestos.

Asbestos can also enhance the strength and workability of some building materials. Some cement, drywall joint compound, and numerous asphalt and tar products contain asbestos, as do some vinyl floor tile and adhesive mastic products.

2.3 HEALTH HAZARDS

EPA has linked exposure to airborne asbestos particles to four diseases: asbestosis, lung cancer, mesothelioma, and nonrespiratory cancers.



Asbestosis: Asbestosis is caused by the scarring of lung tissue or pleural lining in the chest from inhalation of asbestos fibers. This restricts breathing and decreases the lung's effectiveness to intake oxygen into the bloodstream. Though the most common asbestos-related disease, asbestosis is slowly progressive, with a latency period of approximately 15 to 30 years. Exposure to relatively high doses of asbestos dust are necessary for asbestosis to be observed.

Lung Cancer: Lung cancer is the development of malignant tumors that grow and spread within lung tissue. Although lung cancer has been linked to many causes, a clear increase in risk is apparent to workers with known exposure to asbestos. Lung cancer risk especially increases among people who have been exposed to asbestos and also smoke. The latency period between exposure to asbestos and diagnosis of lung cancer is approximately 20 to 30 years. There appears to be no threshold or limit of exposure to asbestos at which lung cancer risk is diminished.

Mesothelioma: Mesothelioma is the cancer of the mesothelium, the pleural lining of the chest or abdominal wall. Considered to be a marker disease for asbestos exposure, mesothelioma is almost always fatal by the time of diagnosis. The latency period between exposure to asbestos and diagnosis of mesothelioma is 30 to 40 years. There appears to be no threshold or limit of exposure to asbestos at which mesothelioma risk is diminished.

Nonrespiratory Cancers: Nonrespiratory cancers with increased incidence rates have been noted among populations exposed to asbestos. These include cancers of the larynx, esophagus, stomach, kidney, pancreas and uterus.



3.0 REGULATORY FRAMEWORK

3.1 REGULATORY BASIS

The Clean Air Act (CAA) requires EPA to develop and enforce regulations to protect the general public from exposure to airborne contaminants known to be hazardous to human health. Asbestos was one of the first hazardous pollutants regulated under the CAA. On March 31, 1971, EPA promulgated the Asbestos Section of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) under Title 40, Code of Federal Regulations (40 CFR) Part 61.

3.2 AHERA

In October 1986, the newly established Asbestos Hazard Emergency Response Act (AHERA) directed EPA to address the identification, evaluation, and control of ACM in primary and secondary schools. The final AHERA rules became effective in October 1987; they are found in 40 CFR 763 Subpart E, Section 763.80 - 763.99 under the Toxic Substances Control Act (TSCA).

On November 28, 1990, the Asbestos School Hazard Abatement Reauthorization Act (ASHARA) was enacted. Section 15 of ASHARA amended AHERA to require inspectors within public and commercial buildings to be accredited pursuant to the asbestos Model Accreditation Plan (MAP). This does not apply to management planners. ASHARA also required EPA to revise MAP to increase hands—on training and make other changes. EPA has not addressed all concerns and expects amendments to MAP will be finalized in early 1994.

3.3 PSAPCA

The Puget Sound Air Pollution Control Agency (PSAPCA) asbestos regulations, outlined below, are more stringent than those of the Spokane County Air Pollution Control Authority, whose jurisdiction includes Spokane, Washington. Consequently, this survey was conducted in accordance with PSAPCA regulations.

On December 12, 1985, PSAPCA adopted its first asbestos regulation, now Article 4 of Regulation III. EPA has delegated authority to PSAPCA to enforce standards within PSAPCA's four-county jurisdiction (King, Snohomish, Pierce, and Kitsap).

On November 20, 1990, EPA promulgated a revised NESHAP regulation to enhance enforcement and promote compliance. On February 11, 1993 PSAPCA adopted a revision to Regulation III, Article 4 to comply with requirements of the new NESHAP regulations and to improve legibility. This new regulation became effective on April 15, 1993. These changes affect all individuals and contractors who remove or disturb asbestos as part of an abatement, remodel, or demolition project in PSAPCA's jurisdiction. As part of this regulation, the project site must be inspected for asbestos using the procedures contained in 40 CFR 763.



3.4 OSHA

The Occupational Safety and Health Administration (OSHA) has established asbestos exposure regulations. The separate regulations for general industry, the construction industry, and use of respirators are in 29 CFR 1910.1001, 29 CFR 1926.58, and 29 CFR 1910.134, respectively. The construction industry regulations cover employees working in demolition, construction, or related activities where exposure to asbestos is likely. The general industry regulations cover all other activities where asbestos exposure is possible, such as employees working in buildings with ACM. The respirator regulations dictate proper respiratory protection and necessary air sampling and monitoring during asbestos work.

3.5 WISHA

The Washington Industrial Safety and Health Act (WISHA) provides for worker health and safety with respect to asbestos. Part I-1, Chapter 296-62 Washington Administrative Code (WAC), General Occupational Health Standards, outlines building owners' responsibilities to inform contractors about the presence and potential for disturbance of ACM. Specifically, the owner or owner's agent must inform the contractor of the presence and potential for disturbance of ACM prior to any construction, removation, remodeling, maintenance, repair, or demolition involving the building in question.

3.6 PROJECT-RELATED REGULATIONS

Asbestos survey work for this contract was conducted by accredited personnel meeting the inspector training requirements of applicable federal, state, and local requirements, specifically AHERA (40 CFR 173-763) and PSAPCA Regulation III, Article 4. The testing laboratories successfully participate in the National Institute for Occupational Safety and Health's (NIOSH) Proficiency Analytical Testing Program. Surveys were conducted in accordance with AHERA and PSAPCA regulations.

Although AHERA regulations do not specifically apply to USARCs, the asbestos surveys were performed in general accordance with AHERA regulations. Because ACM was found at this facility, it is advisable that walk-through inspections be performed every 6 months and a thorough reinspection should occur within 3 years of this survey. In addition, preparation of an asbestos operations and maintenance (O&M) plan is advisable for this facility.



4.0 SURVEY PROCEDURES

4.1 INSPECTION PROCEDURES FOR ACM

AGI personnel inspected the Spokane USARC facility for ACM on November 10, 1993. The inspection was conducted in accordance with AHERA and PSAPCA regulations.

Facility inspection included two steps: an initial site walk-through and a subsequent full inspection. The initial site walk-through was conducted with the facility manager to familiarize the building inspectors with the facility layout. Facility plans, as-builts, and specifications or contracts were reviewed. The facility manager was also questioned about the history of maintenance, renovation, and asbestos abatement, if applicable, for each building.

For each building, suspected ACM was identified and functional spaces were documented during the full inspection. Quantity, condition, and extent of each suspected ACM were evaluated, and samples for bulk analysis were collected following AHERA guidance. For obvious ACMs, such as cement asbestos board, no samples were collected; these materials were designated as assumed ACMs. Roofs and roof-mounted heating, ventilation, and air conditioning (HVAC) equipment were visually evaluated, but no destructive sampling was performed.

4.2 ASSESSMENT, SAMPLING, AND SAMPLE HANDLING

Homogeneous material samples were collected during inspection in accordance with AHERA guidance for the type of suspected ACM. Locations and number of bulk samples were selected to provide optimal coverage while minimizing disruption to ongoing activities. After collection, samples were immediately moistened and placed into two layers of resealable plastic bags.

Each suspected material was assigned a unique identification number indicating facility, building, and material. For example, SPK-R0001-01 identifies the facility (SPK = Spokane), building (R0001 = Building R0001), and material (01 = material number 01). This number also served as the sample number, except for materials requiring multiple samples, for which letters in alphabetical order were added to the end of the material number to denote different samples. For materials containing adhesive mastic, an additional "T" or "M" was added at the end to denote tile or mastic, respectively. Sample information was recorded on field data sheets and locations were recorded on building plans.

Each sample container was appropriately labeled and secured. Sampling tools were cleaned by wiping with a wet towel after each sample collection. Photographs were taken at sample collection locations where building inspectors deemed appropriate. Repairs resulting from destructive sampling were performed as appropriate.

Assumed and suspected ACMs were divided into three categories: 1) surfacing materials; 2) thermal system insulation; and 3) miscellaneous material. The friability, quantity, and extent of each material were noted. Factors such as accessibility, contact frequency, and air or water erosion were recorded to yield an overall disturbance potential rating for each suspected material. Extent, quantity, and type of damage, if visible, were also recorded to characterize each suspected material's overall condition.



4.3 QUALITY CONTROL/QUALITY ASSURANCE

4.3.1 General

Quality control (QC) and quality assurance (QA) duplicate samples were collected during this 23-facility asbestos survey. QC duplicate samples were collected at a rate of approximately 5.8 percent of the total number of samples. Each of these samples was divided in half, placed into two sample containers, and labeled so that AGI could distinguish duplicates. All regular and QC duplicate samples were submitted to Analytical Technologies, Inc. (ATI) of Pensacola, Florida for analysis. QA duplicate samples were collected at a rate of approximately 1.0 percent of the total number of samples and submitted to Prezant Associates, Inc. (Prezant) of Seattle, Washington for analysis. QA and QC results are compared and discussed with the results for regular samples in Section 6.0.

4.3.2 Spokane Facility

No QA or QC duplicate samples were collected for the Spokane USARC.

4.4 CHAIN-OF-CUSTODY AND SHIPPING

Chain-of-custody forms were completed and included with all samples submitted to the analytical laboratories. Proper chain-of-custody protocol was maintained throughout sample collection and shipping.

4.5 ANALYSIS

Samples were analyzed in accordance with AHERA requirements using methods referred to in EPA's Interim Method for the Detection of Asbestos in Bulk Insulation Samples (EPA 600/M4-82020, December 1982). ATI and Prezant analyzed samples using polarized light microscopy. Both laboratories are accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and participate in NIOSH's Proficiency Analytical Testing Program.

For materials requiring multiple samples, ATI generally analyzed the samples only until a positive result was achieved, or until all samples were shown to be negative. For example, if three floor tile samples (including mastic) were collected, and the first tile and mastic samples were positive, the remaining samples were not analyzed. Prezant analyzed all submitted samples.

Flooring material (floor tile or vinyl sheet flooring) with mastic is considered a single unit; the flooring and mastic were analyzed separately by the laboratories but not considered separately in assessing ACM status. A positive result for either material (flooring or mastic) confirms both together as an ACM.

4.6 INSPECTION LIMITS

Interior spaces and rooms of each building were inspected for ACM, and suspected materials were sampled. Building roofs, attached exterior surfaces, and HVAC equipment (if present) were also inspected.



5.0 FACILITY SUMMARY

5.1 FACILITY DESCRIPTION AND USE

The Spokane USARC was constructed in the 1950s, according to the facility manager. An addition was made to Building R0001, known as Mann Hall, in the 1970s. The facility serves as a small unit headquarters within the 124th ARCOM and has full-time staff who conduct daily operations.

The two buildings on site (Buildings R0001 and R0002) are used for office/administration, classrooms, and vehicle maintenance during daily and weekend drill operations.

- ▶ Building R0001 is the facility headquarters with numerous offices, classrooms, storage areas, a firing range, and an assembly room.
- ▶ Building R0002, the facility motor pool, has offices, storage rooms, and three vehicle service bays.

5.2 PREVIOUS ASBESTOS WORK

According to the facility manager, an asbestos abatement has been performed since the facility was constructed but no plans or other details were known.

5.3 CURRENT ACM INVENTORY/PRIORITIZATION

5.3.1 ACM Summary

ACM is present within Building R0001 and is assumed from our observations to be present in Building R0002. Table 5.1 summarizes ACM at the facility.

5.3.2 ACM Hazard/Removal Prioritization

Following EPA/AHERA guidance, the hazard of individual ACMs is ranked based on overall material condition and disturbance potential. Based on each individual ACM hazard ranking, material removal prioritization is assigned. This ranking scheme is outlined below. Table 5.1 summarizes hazard and removal rankings for each ACM.

Overall Condition	Disturbance Potential	Removal <u>Priority</u>	Hazard <u>Rank</u>
Poor	Any	1 (highest priority)	7 (very significant hazard)
Fair	High	2	6
Fair	Moderate	3	5
Fair	Low	4	4



Overall Condition	Disturbance <u>Potential</u>	Removal <u>Priority</u>	Hazard <u>Rank</u>
Good	High	5	3
Good	Moderate	6	2
Good	Low	7 (lowest priority)	1 (low hazard)

ACM characterized as damaged and friable was designated as an emergency if readily accessible by facility staff or visitors.

5.3.3 AHERA Category

Following AHERA requirements, friable ACMs were also grouped by the following seven AHERA assessment categories:

- 1 Damaged or significantly damaged thermal system insulation (TSI) ACM
- 2 Damaged friable surfacing ACM
- 3 Significantly damaged friable surfacing ACM
- 4 Damaged or significantly damaged friable miscellaneous ACM
- 5 ACM with potential for damage
- 6 ACM with potential for significant damage
- 7 Any remaining friable ACM or friable suspected ACM

5.4 DATA PRESENTATION

Table 5.1 summarizes ACM for the facility. Section 6.0 presents ACM inventories and floor plans for each contract building so that each subsection can serve as a stand-alone building ACM survey report.

5.5 USE OF THIS REPORT

A copy of this report should be sent to the facility manager. A responsible person, such as the facility manager, should understand this report and be able to inform contractors (specialized or general) about the presence of ACM before starting any construction, renovation, remodeling, maintenance, repair (including emergency) or demolition project at the facility; Part I-1, Chapter 296-62 WAC outlines this requirement. Copies of building-specific subsections of this report should be kept at each respective building. This will enable contractors to have ready access to ACM information.



Table 5.1 ACM - Facility Summary Report

t. Lewis/DEH/Asbestos Surveys	4,340.201	Spokane USARC
Project Name	Project Number	Facility

Emergency?		S No	No	No	No	No	No	No	Yes	S _O	S S
AHERA Category (friable only)									-		
Removal Priority		7	7	7	7	7	7	7	1	7	7
Hazard Ranking		1	1	1	1	1	1	1	7	1	1
HOMOGENEOUS MATERIAL	Description	Floor Tile	Floor Tile	Floor Tile	Floor Tile	Floor Soundproofing	Gasket	Electrical Insulation	Thermal Pipe Insulation	Metal Doors	Metal Doors
HOMOGEN	Assessment Number	SPK-R0001-02	SPK-R0001-06	SPK-R0001-07	SPK-R0001-08	SPK-R0001-09	SPK-R0001-10	SPK-R0001-11	SPK-R0001-12	SPK-R0001-13	SPK-R0002-01
Location		Main Hallway	Offices/Classrooms	Medical Area	Offices/Medical	Second Floor	Boiler Room	Boiler Room	Assembly Hall	Throughout Building	Throughout Building
Building		R0001	R0001	R0001	R0001	R0001	R0001	R0001	R0001	R0001	R000Z



6.0 BUILDING-SPECIFIC REPORTS

6.1 GENERAL

The following sections present individual asbestos inspection reports for Buildings R0001 and R0002.

Each building report includes:

- ▶ Inspection results, including building description and observations regarding suspected ACM.
- ▶ Building plans with locations of suspected/confirmed ACM and sample locations.
- ▶ A key to the building plan symbols.
- Summary data table of suspected/confirmed ACM for each building.

Appendix A presents laboratory analytical results. Appendices B and C, respectively, document analytical laboratory and inspector accreditation.



6.2 BUILDING ROOO1

Facility: Spokane USARC - Mann Hall

Inspection Date: 10 November 1993

Inspectors: John Ambrose and Bill Dewey

Survey Contractors: AC

6.2.1 Building Description and Use

Building R0001 is a two-story office/classroom building with an indoor firing range in the basement. The building is constructed primarily of concrete block, brick, and metal frame walls with metal frame and an asphalt/gravel roof.

6.2.2 Survey Results

As shown on Figures 6.1a, 6.1b, and 6.1c, the following suspected ACMs were observed for this building:

White Acoustical Ceiling Tile: White 12-inch by 12-inch acoustical ceiling tile covers the entire ceiling and most of the walls of the second floor and the firing range. The tile is supported by metal framework and is partially damaged around the firing line area. Samples SPK-R0001-01A through -OIE indicate this tile is not an ACM.

White-Brown Floor Tile: White-brown 12-inch by 12-inch floor tile with tan mastic covers most of the first floor hallway. Samples SPK-R0001-02A through -02C indicate the tile and tan mastic are not ACMs; however, the laboratory documented that asbestos is present in traces of black mastic adhering to the tan mastic. Because the occurrence of the black mastic, which may be an ACM, may be more widespread and concentrated, the mastic is assumed to be an ACM.

Brown-Red Cove Base: Brown-red cove base with brown mastic is located in many offices on the first floor. Samples SPK-R0001-03A through -03C indicate this cove base and mastic are not ACMs.

Black Cove Base: Black cove base with brown mastic is located in the hallway and several offices on the first floor. Samples SPK-R0001-04A through -04D indicate this cove base and mastic are not ACMs.

Green Cove Base: Green cove base with tan mastic is located within the assembly hall. Samples SPK-R0001-05A through -05C indicate this cove base and mastic are not ACMs.

Brown Floor Tile: Brown 9-inch by 9-inch floor tile (brown, red, and white) with black mastic is located throughout much of the first floor office/classroom area. Samples SPK-R0001-06A through -06C indicate this tile and mastic are ACMs.

Black Floor Tile: Black 12-inch by 12-inch floor tile with black mastic is located in the medical x-ray and examination rooms in the northwest corner of the first floor. Samples SPK-R0001-07A and -07B indicate this tile and mastic are ACMs.



Off-White Floor Tile: Off-white 12-inch by 12-inch floor tile with black mastic is located in the addition on the northern part of the building. Samples SPK-R0001-08A through -08C indicate this tile and mastic are ACMs.

Floor Soundproofing: Soundproofed hardwood floors are located throughout much of the second floor. Because no penetrating samples were collected through the hardwood floors, the floor soundproofing is assumed to be an ACM (assessment SPK-00001-09).

Boiler Room Gasket: Dark gray gasket material is located on a furnace/boiler face connection. Because no sample could be collected without damaging the furnace, the gasket is assumed to be an ACM (assessment SPK-R0001-10).

Electrical Switch Box Insulation: Two electrical panels within the boiler room are assumed from our observations to contain ACM insulation (assessment SPK-R0001-11).

Assembly Hall Thermal Pipe Insulation: White thermal pipe insulation covers the steam heat piping in the assembly room. This was the only assumed ACM pipe insulation found at the facility; pipe insulation throughout the remainder of the building has been replaced with fiberglass. The pipe insulation consists of 3-, 6-, and 8-inch-diameter air-cell insulation with probable hand-packed mud around the fittings. Approximately 362 feet of this insulation is assumed to be ACM (assessment SPK-R0001-12). Damage to insulation was observed below two steam traps at grid coordinates H-26 and J-36 (see Figure 6.1b) and on part of the 6-inch line between grid coordinates I-26 and J-26. Damage has caused the insulation to be friable, with the highest hazard and removal priority.

Insulated Metal Doors: Insulated metal doors (eight total) are assumed from our observations to contain ACM (assessment SPK-R0001-13).

Wallboard/Lath and Plaster Walls: Wood or metal frame walls and ceilings, covered by either wallboard or lath and plaster, were inspected, and no suspected ACMs were visible. Wall materials such as wallboard, joint compound, and plaster, however, may contain asbestos, and walls may have been repaired or renovated in unidentified areas using ACMs. It is therefore impracticable to obtain representative samples of these materials even by sampling all individual walls and ceilings, which was not done for this survey. Because confirmatory samples were not collected, all individual walls and ceilings should be considered as potentially containing ACMs. Prior to any future repair, renovation, demolition, or other maintenance activities involving any wall or ceiling, fully penetrating core samples of wall/ceiling materials must be collected and analyzed to protect human health and the environment.

Roof: The roof and associated HVAC equipment were inspected, and no suspected ACMs were visible. Because destructive sampling may cause irreparable roof damage, confirmatory samples of all roofing materials were not collected and the roof should be considered as potentially containing ACMs (particularly in tar and roofing cement). Prior to any future repair, renovation, demolition, or other maintenance activities involving the roof, fully penetrating core samples of roofing materials must be collected and analyzed to protect human health and the environment.

Sample Location Key Sample / Assessment Number (Shading denotes RTN-00420-01A positive ACM Brown FT #100 SF results) Color/ Quantity: Description LF = linear feet SF = square feet Sample Location on CF = cubic feet Ea = each Plan

Legend **Extent of Asbestos-Containing** Material (ACM)

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ACM - Floor/Floor-Mounted Equipment



ACM - Ceiling/Ceiling-Mounted Equipment



ACM - Floor & Ceiling



ACM - Sprayed-on Ceiling



ACM - Wall



ACM - Pipe Insulation (Horizontal Run)



ACM - Pipe Insulation (Vertical Riser)



ACM-Assumed Insulated Metal Door

Homogeneous Material Code

AC	Acoustical Material
BI	Boiler Insulation
CA	Caulking/Putty

Cement Asbestos Board CB

(Transite)

Cement Asbestos Pipe CP

Ceiling Tile CT CV Cove Base **Duct Paper** DP

Exterior Siding Tile ET

Electrical Wire/Switch EW

Insulation

Flexible HVAC Connector FC

Fireproofing FP

Floor Soundproofing FS

Floor Tile FT Gaskets GA

Spray-in Wall Insulation IN

Joint Compound JC

Linoleum (Vinyl Sheet) Flooring LN

Mastic MA

Other Miscellaneous Material MΙ

MT Mortar PA Paint

Popcom Ceiling Material PC

Pipe Fitting Insulation PF

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PLPlaster

Roofing Material RM

Other Surfacing Material SM

Tank Insulation TI

Tar Paper TP

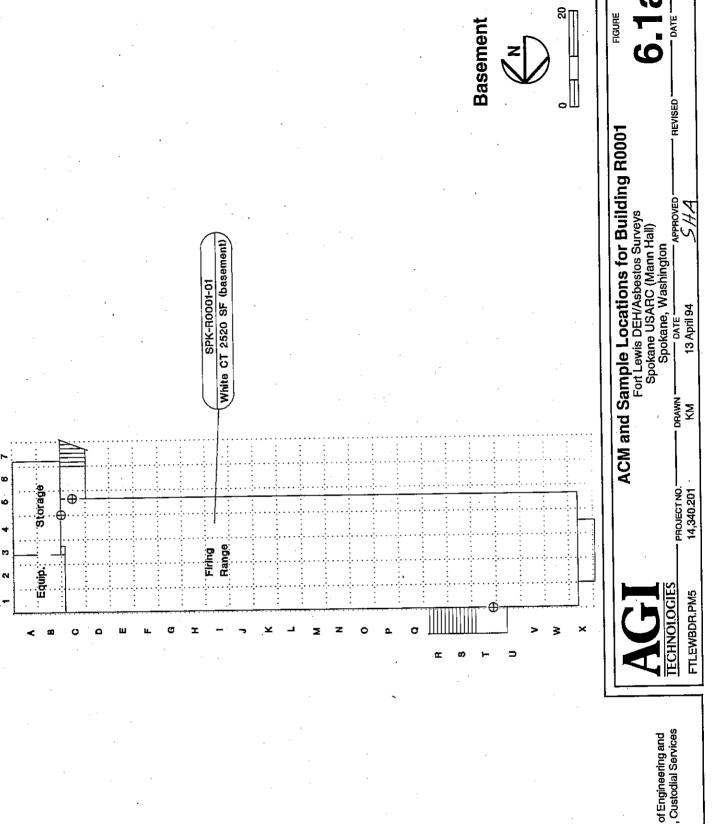
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WP Window Putty/Glazing

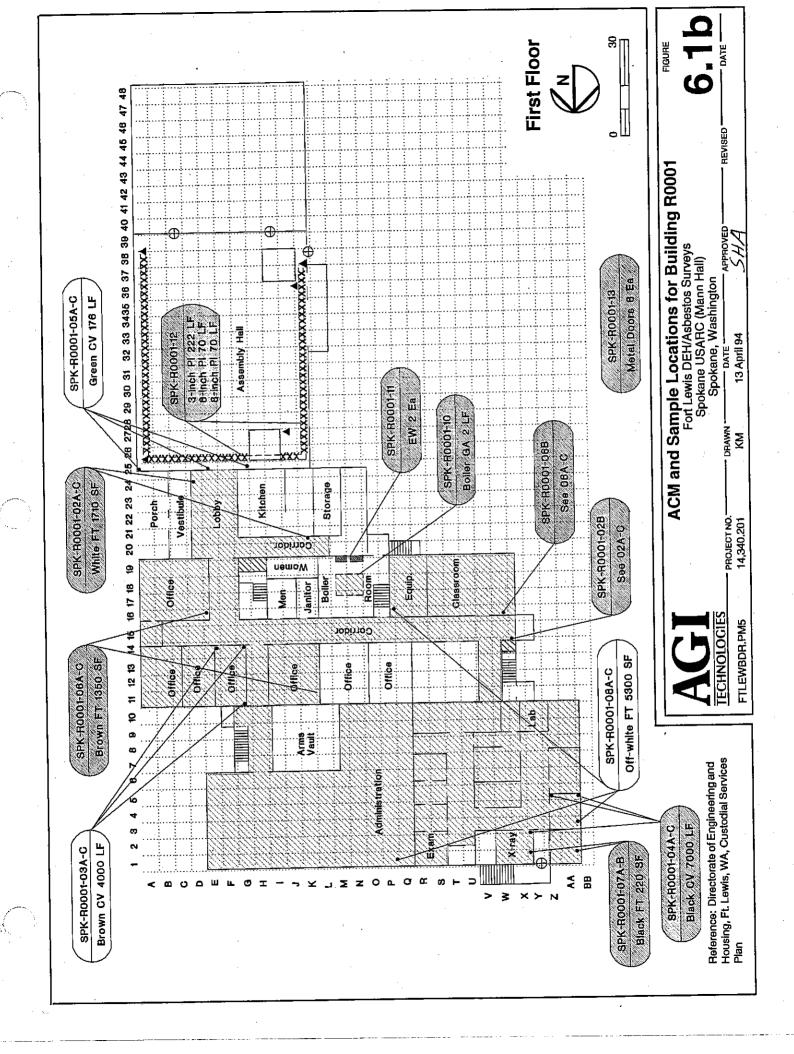
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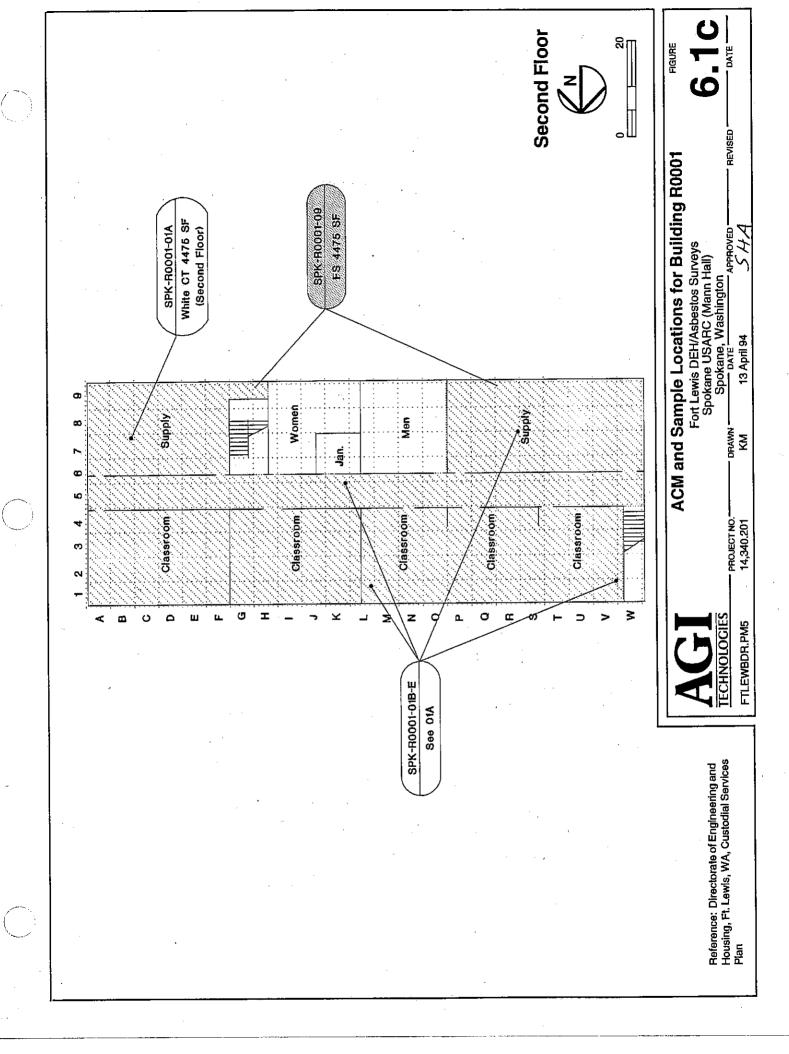
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Reference: Directorate of Engineering and Housing, Ft. Lewis, WA, Custodial Services Plan







Ft. Lewis/DEH/Asbestos Surveys	14,340.201	Spokane USARC	R0001	11/10/93
Project Name	Project Number 14,340.201		Building	

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spectors		Project Task Manager

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-01	SPK-R0001-01
Type	Miscellaneous
Description - General Ceiling Tile	Ceiling Tile
Description - Detailed	Description - Detailed White 12" x 12" ceiling tile
Total Quantity	6995 Square Feet
Friable	No
Air Plenum	No
ACM Status	Negative
Hazard Ranking	
Removal Priority	
AHERA Category	
Emergency?	No
Comments	Tile supported by metal frame. 4475 SF on second floor, 2520 SF in basement.

Overall Naterial	Good	
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CF = Cubic Feet EA = Each SF = Square Feet LF = Linear Feet Notes:

NS = Not Sampled ND = Not Detected

NA(iS) = Not Analyzed due to Insufficient Sample NA = Not Analyzed

**ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material *ACM status confirmed for tile/flooring, mastic, or both

> Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority) Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)

Disturbance Potential - Likelihood that suspected ACM will release fibrous asbestos (Low, Moderate, High) Material Condition - State of material's structural integrity (Poor, Fair, Good)



Number 14,340.201 Spokane USARC R0001

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Notes:	LF = Linear Feet	CF = Cubic Feet	NS = Not Sampled	NA = No
	SF = Square Feet	EA = Each	ND = Not Detected	NA(IS) =

Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)

NA = Not Analyzed NA(iS) = Not Analyzed due to insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both **ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material

Disturbance Potential - Likelihood that suspected ACM will release fibrous asbestos (Low, Moderate, High) Material Condition - State of material's structural integrity (Poor, Fair, Good)

Ft. Lewis/DEH/Asbestos Surveys	14,340.201	Spokane USARC	R0001	11/10/93
Project Name	Project Number 14,340.201		Building	
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HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-02	SPK-R0001-02
Туре	Miscellaneous
Description - General Floor Tile	Floor Tile
Description - Detailed	Description - Detailed White 12" x 12" floor tile (80% off-white, 20% brown) with tan mastic
Total Quantity	1710 Square Feet
Friable	No
Air Plenum	No
ACM Status	Assumed**
Hazard Ranking	
Removal Priority	
AHERA Category	
Emergency?	No
Comments	Occurence of black mastic (which may be ACM) attached to tan mastic may be widespread and more concentrated.

Overall Material Condition	Good	
Quantity		
ATERIAL CONDITION Damage Extent Type		
MATERIAL (None Visible	
Overall Disturbance Potential	Low	
Erosion Air Water	Low	İ
Eros	Low	
E POTENTIAL Contact Frequency	Moderate	
DISTURBANCE POTEN Accessibility Conta	High	
Quantity	1710 SF	
OCCURRENCE Location (Functional Space)	Main Hallway	

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Notes: LF = Linear Feet CF = Cubic Feet SF = Square Feet EA = Each

NS = Not Sampled ND = Not Detected

NA = Not Analyzed NA(IS) = Not Analyzed due to Insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both **ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)



Ft. Lewis/DEH/Asbestos Surveys	roject Number 14,340.201	Spokane USARC	R0001	11/10/93
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SPK-R0001-02 B-T SPK-R0001-02 C-M

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Notes:	LF = Linear Feet	CF = Cubic Feet	NS = Not Sampled	NA N
	SF = Square Feet	EA = Each	ND = Not Detected	NA(E

Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)

Sample

Disturbance Potential - Likelihood that suspected ACM will release fibrous asbestos (Low, Moderate, High)

Material Condition - State of material's structural integrity (Poor, Fair, Good)

Ft. Lewis/DEH/Asbestos Surveys	14,340.201	Spokane USARC	R0001	11/10/93
Project Name	Project Number 14,340.201	Facility	Building	Date

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John Ambrose	Bill Dewey	Scott Adamek
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HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-03	SPK-R0001-03
Type	Miscellaneous
Description - General Cove Base	Cove Base
Description - Detailed	Description - Detailed Brown-red cove base with brown mastic
Total Quantity	4000 Square Feet
Friable	No
Air Plenum	No
ACM Status	Negative
Hazard Ranking	
Removal Priority	
AHERA Category	
Emergency?	No
Comments	Less than 1% tremolite asbestos detected in tile samples SPK-R0001-03B-T and -03C-T.
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Overall Material Condition	_	
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Damage Type	\neg	
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ATERIAL CONDITION Damag Extent Type	None Visible	
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Overall Disturbance Potential	Low	ı
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Notes: LF = Linear Feet CF = Cubic Feet SF = Square Feet EA = Each

NS = Not Sampled ND = Not Detected

NA = Not Analyzed NA(IS) = Not Analyzed due to insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)



Et 1 swic/DEU/Achoetoe Surveye	rt. Lewis/DEn/Aspesios outveys	14,340.201	Spokane USARC	R0001	11/10/93
	roject Name	roject Number 14,340.201	J	βι	

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sbestos Surveys	Inspectors John Ambrose	
	Bill Dewey	A Comment of the comm
	Project Task Manager Scott Adamek	God The wal
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SPK-H0001-03 B-M 3/21/94 1330	3/21/94	1330	6.1b	G-11	0		QN
SPK-R0001-03 B-T	3/21/94 1330	1330	6.1b	G-11	o		 <1% tremolite
SPK-R0001-03 C-M 3/21/94 1339	3/21/94	1339	6.1b	G-14	0		ΩN
SPK-R0001-03 C-T 3/21/94 1339	3/21/94	1339	6.1b	G-14	0		<1% tremolite

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NS = Not Sampled ND = Not Detected

CF = Cubic Feet EA = Each

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Notes:

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material

Ft. Lewis/DEH/Asbestos Surveys	Project Number 14,340.201	Spokane USARC	R0001	11/10/93
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John Ambrose	Bill Dewey	Scott Adamek
nspectors		roject Task Manager

HOMOGENEOUS MATERIAL

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LF = Linear Feet	SF = Square Feet
Notes:	

NS = Not Sampled ND = Not Detected

NA = Not Analyzed NA(IS) = Not Analyzed due to Insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both **ACM status assumed due to ACM tile/flooring, mastic, or both attached to this file/floor material

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)



Ft. Lewis/DEH/Asbestos Survevs	14,340.201	Spokane USARC	R0001	11/10/93
Project Name	roject Number 14,340.201	sility	lding	9

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USARC					DIII Dewey	Carlo Harman	1
			roject Task M	anager	Project Task Manager Scott Adamek		
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Notes: LF = Linear Feet	SF = Square Feet	
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Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)

*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material

Project Name Ft. Lewis/DEH/Asbestos Surveys	14,340.201	Spokane USARC	R0001	11/10/93
ct Name	Project Number 14,340.201	<u> </u>	Building	Date

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nspectors John Ambrose	Bill Dewey	oject Task Manager Scott Adamek

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-05	SPK-R0001-05
Type	Miscellaneous
Description - General Cove Base	Cove Base
Description - Detailed	Description - Detailed Green cove base with tan mastic
Total Quantity	176 Linear Feet
Friable	No
Air Plenum	No
ACM Status	Negative
Hazard Banking	
Removal Priority	
AHERA Category	
Emergency?	No
Comments	

	Overall Material	ndition	Good	
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CF = Cubic Feet	EA = Each
LF = Linear Feet	SF = Square Feet
Notes:	

NS = Not Sampled ND = Not Detected

NA = Not Analyzed NA(IS) = Not Analyzed due to Insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)



Ft. Lewis/DEH/Asbestos Surveys	4,340.201	Spokane USARC	R0001	11/10/93
oject Name	roject Number 14,340.201	llity	ding	Jate

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	Bill Dewey	Call Comment
	Project Task Manager Scott Adamek	The state of the s

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	Date 1-	SPK-R0001-05 A-T 11/10/93 1445	SPK-R0001-05 B-M 3/21/94	SPK-R0001-05 B-T	SPK-R0001-05 C-M 3/21/94	SPK-R0001-05 C-T 3/21/94 1215

Notes: LF=Linear Feet CF=Cubic Feet SF=Square Feet EA=Each

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

NS = Not Sampled NA = Not Analyzed
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NA(IS) = Not Analyzed due to Insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material

Ft. Lewis/DEH/Asbestos Surveys	14,340.201	Spokane USARC	R0001	11/10/93
Project Name	Project Number 14,340.201	Facility	Building	

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John Ambrose	Bill Dewey	Scott Adamek
nspectors		roject Task Manager

AGI TECHNOLOGIES

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-06	SPK-R0001-06	
Tvne	Miscellaneous	
intion - General	Floor Tile	
Description - Detailed	Description - Detailed Brown 9" x 9" floor tile (90% brown, 5% red, 5% white) with black mastic	
Total Quantity	1350 Square Feet	
	No	,
Air Plenum	No	
	Confirmed*	- m
cina		
Removal Priority		
AHERA Category		
Emergency?	No	
Comments		

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Good		-	None Visible	Low	Low	Low	Moderate	High	1350 SF	fices/Classrooms
Condition	Quantity	Туре	Extent	Potential	Water	Air	Fredneucy			unctional Space)
Overall		Damage		Overall	rosion	ETO	Contact	Accessibility	Quantity	
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LF = Linear Feet	SF = Square Feet
Notes:	

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NA = Not Analyzed
NA(IS) = Not Analyzed due to insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both **ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

Ft. Lewis/DEH/Asbestos Surveys	t Number 14,340.201	Spokane USARC	R0001	11/10/93
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John Ambrose	Bill Dewey	Scott Adamek
nspectors		Project Task Manager

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SPK-R0001-06 A-T 11/10/93 1330	11/10/93	1330	6.1b	E - 16	0	15%		15%	
SPK-R0001-06 B-M 11/10/93 1340	11/10/93	1340	6.1b	W - 16	0				N
SPK-R0001-06 B-T 11/10/93 1340	11/10/93	1340	6.1b	W - 16	0		٠		Z
SPK-R0001-06 C-M 11/10/93 1355	11/10/93	1355	6.1b	K-11	0		•		Z
SPK-R0001-06 C-T 11/10/93 1355	11/10/93	1355	6.16	K-11	o				Z

*ACM status confirmed for tile/flooning, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material

NA(iS) = Not Analyzed due to insufficient Sample

NS = Not Sampled ND = Not Detected

CF = Cubic Feet EA = Each

LF = Linear Feet SF = Square Feet

Notes:

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

NA = Not Analyzed

Ft. Lewis/DEH/Asbestos Surveys	roject Number 14,340.201	Spokane USARC	R0001	11/10/93
Project Name	ıber			

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John Ambrose	Bill Dewey	Scott Adamek
rspectors		roject Task Manager

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-07	SPK-R0001-07	
Туре	Miscellaneous	
Description - General Floor Tile	Floor Tile	-
Description - Detailed	Description - Detailed Black 12" x 12" floor tile with black mastic	
Total Quantity	220 Square Feet	
Friable	No	
Air Plenum	No	
ACM Status	Confirmed*	
Hazard Ranking		
Removal Priority		
AHERA Category		
Emergency?	No	
Comments		

Overall Material Condition	Good	
Quantity		
ONDITION Damage Type		
MATERIAL CONDITION Damaç Extent Type	None Visible	
Overall Disturbance Potential	Low	
Erosion r Water	Low	
Ero: Air	Low	
E POTENTIAL Contact Frequency	Moderate	
DISTURBANCE Accessibility	High	
Quantity	220 SF	
OCCURRENCE Location (Functional Space)	Medical Area	

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Notes:	

NS = Not Sampled ND = Not Detected

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NA = Not Analyzed NA(IS) = Not Analyzed due to Insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)



Ft. Lewis/DEH/Asbestos Surveys	14,340.201	Spokane USARC	R0001	11/10/93
Project Name	Project Number	Facility	Building	Date

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SPK-R0001-07 B-M SPK-R0001-07 B-T

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John Ambrose	Bill Dewey	Project Task Manager Scott Adamek				
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*ACM status confirmed for tile/flooring, mastic, or both	**ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material	
NA = Not Analyzed	NA(IS) = Not Analyzed due to Insufficient Sample	
NS = Not Sampled	ND = Not Detected	

Disturbance Potential - Likelihood that suspected ACM will release fibrous asbestos (Low, Moderate, High) Material Condition - State of material's structural integrity (Poor, Fair, Good)

> Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority) Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)

CF = Cubic Feet

EA = Each

SF = Square Feet LF = Linear Feet

Notes:

	Ft. Lewis/DEH/Asbestos Surveys	01	Spokane USARC		
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		ber 14,340.2	Spokan	R0001	11/10/93
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,		Number 14,340.2	Spokan		11/10/93
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	Project Name Ft. Lewi	Project Number 14,340.201	Facility Spokan	Building R0001	Date 11/10/93

inspectors	lohn Ambrose 3III Dewey	Grand Carl
Project Task Manager	scott Adamek	Sort Ballet

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-08	SPK-R0001-08
Туре	Miscellaneous
Description - General Floor Tile	Floor Tile
Description - Detailed	Description - Detailed Off-White 12" x 12" floor tile (90% off-white, 10% brown) with black mastic
Total Quantity	5300 Square Feet
Friable	No
Air Plenum	No
ACM Status	Confirmed*
Hazard Ranking	
Removal Priority	
AHERA Category	
Emergency?	No
Comments	

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MATERIAL CONDITION				
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Notes:	

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)

NS = Not Sampled NA = Not Analyzed
ND = Not Detected NA(IS) = Not Analyz

NA(IS) = Not Analyzed due to Insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material



Ft. Lewis/DEH/Asbestos Surveys	4,340.201	Spokane USARC	R0001	11/10/93
Project Name F	Project Number 14,340.201	Facility	Building	Date 1

Project Task Manager Scott Adamek	veys	Inspectors John Ambrose	(A) (2. C)
Scott Adamek		Bill Dewey	CHOCK OF THE CONTROL
		Project Task Manager Scott Adamek	John Bress

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Date	SPK-R0001-08 A-T 11/10/93 1450	SPK-R0001-08 B-M 11/10/93 1455	SPK-R0001-08 B-T 11/10/93 1455	SPK-R0001-08 C-M 11/10/93 1458	SPK-R0001-08 C-T 11/10/93 1458	_

NA = Not Analyzed ND = Not Detected NS = Not Sampled CF = Cubic Feet

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Notes:

Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority) Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)

**ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material NA(iS) = Not Analyzed due to insufficient Sample

*ACM status confirmed for tile/flooring, mastic, or both

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	roject Name	Project Number 14,340.201	=acility	Building	Jate

Sh ah	Mr Eparme	Sorte of Alleh
John Ambrose	Bill Dewey	Manager Scott Adamek

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-09	SPK-R0001-09	
Type	Miscellaneous	
Description - General Floor Soundproofing	Floor Soundproofing	
Description - Detailed	Description - Detailed Oak floor over soundproofing material	
Total Quantity	4475 Square Feet	
Friable	No	
Air Plenum	No	
ACM Status	Assumed	
Hazard Ranking		
Removal Priority		
AHERA Category		
Emergency?	No	
Comments	Possible ACM between flooring and plywood used for soundproofing.	

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CURRENCE	Location	unctional Spa	Second Floor	
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CF = Cubic Feet EA = Each SF = Square Feet LF = Linear Feet Notes:

NS = Not Sampled ND = Not Detected

NA(IS) = Not Analyzed due to Insufficient Sample NA = Not Analyzed

**ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material *ACM status confirmed for tile/flooring, mastic, or both

Disturbance Potential - Likelihood that suspected ACM will release fibrous asbestos (Low, Moderate, High)

Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority) Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)

Material Condition - State of material's structural integrity (Poor, Fair, Good)

Ft. Lewis/DEH/Asbestos Surveys	Project Number 14,340.201	Spokane USARC	R0001	11/10/93
Project Name	er			

(M. 121	mrio (ADM)	James Johnson
Inspectors John Ambrose	Bill Dewey	Project Task Manager Scott Adamek

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-10	SPK-R0001-10
Tvde	Miscellaneous
Description - General Gasket	Gasket
Description - Detailed	Dark gray gasket material on boiler facing
Total Quantity	2 Linear Feet
Friable	No
Air Plenum	No
ACM Status	Assumed
Hazard Ranking	
Removal Priority	7
AHERA Categony	
Emergency?	No
Comments	Gasket material should be tested if boiler is taken off line for repairs.
50 m 50 m 70 m 70 m 70 m 70 m 70 m 70 m	

Overall Material Condition	Good	
Quantity		
ATERIAL CONDITION Damage Extent Type		
MATERIAL (Extent	None Visible	
Overall Disturbance Potential	Low	
rosion	Low	
Eros	Low	
E POTENTIAL Contact Frequency	Low	
DISTURBANCI Accessibility	Low	
Quantity	2 LF	
OCCURRENCE Location (Functional Space)	Boiler Room	

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Ft. Lewis/DEH/Asbestos Surveys	Project Number 14,340.201	Spokane USARC	R0001	11/10/93
Project Name)eľ			

TECHNOI		Me Deam	Level & Chief
	John Ambrose	Bill Dewey	Scott Adamek
	Inspectors		Project Task Manager

HOMOGENEOUS MATERIAL

	Overall Material	Condition	Good	
		Quantity		
NOTTIONO	Damage	Туре		
MATERIAL CONDITION		Extent	None Visible	
	Overall	រ	Low	
	rosion	Water	Low	
	Eros	Air	Low	
POTENTIAL	Contact	riequelloy	Low	
DISTURBANCE POTEN	Accessibility		Low	
	Quantity		2 EA	
OCCURRENCE	Location	(Functional Space)	Boiler Room	

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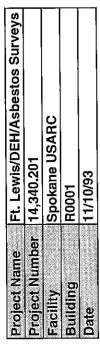
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LF = Linear Feet	SF = Square Feet
Notes:	

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NA = Not Analyzed NA(IS) = Not Analyzed due to insufficient Sample

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Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)



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John Ambrose	Bill Dewey	nager Scott Adamek
nspectors		roject Task Manager

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0001-12	SPK-R0001-12
Type	Thermal System Insulation
Description - General Thermal Pipe Insulation	Thermal Pipe Insulation
Description - Detailed	Description - Detailed Pipe insulation on steam heating system in assembly hall
Total Quantity	362 Linear Feet
Friable	Yes
Air Plenum :	No
ACM Status	Assumed
Hazard Ranking	
Removal Priority	
AHERA Category	
	Yes
Comments	Facility manager notified of problem; damage in 3 locations. Approximately 362 linear feet (air cell) & 30 mudded fittings.
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	

Overall Material Condition	Poor	
Quantity	6 LF	
DNDITION Damage Type	Physical	
MATERIAL CONDITION Dam Extent Type	Localized	
Overall Disturbance Potential	Low	
Erosion r Water	Low	
Eros	Low	
E POTENTIAL Contact Frequency	Low	
DISTURBANCE POTE Accessibility Cont	Low	
Quantify	362 LF	
OCCURRENCE Location (Functional Space)	Assembly Hall	

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NA = Not Analyzed

NA(IS) = Not Analyzed due to Insufficient Sample

**ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material *ACM status confirmed for tile/flooring, mastic, or both

Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority) Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)



Ft. Lewis/DEH/Asbestos Surveys	4,340.201	Spokane USARC	R0001	11/10/93
Project Name	Project Number 14,340.201	Facility	Building	Date

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	John Ambrose	Bill Dewey	anager Scott Adamek
	ectors		ect Task Manager

HOMOGENEOUS MATERIAL

00000000	
Assessment Number SPK-R0001-13	001-13
Type Miscellaneous	Shoor
Description - General Metal Doors	001'S
Description - Detailed Insulated metal doors	i metal doors
Total Quantity 8 Each	
Friable	
Air Plenum No	
ACM Status Assumed	
Hazard Ranking	
Removal Priority 7	
AHERA Category	
Emergency? No	
Comments	

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Overall Material	Good
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ADITION Damage Type	
IATERIAL CONDITION Dama Extent Type	:
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Notes: LF = Linear Feet CF = Cubic Feet SF = Square Feet EA = Each

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*ACM status confirmed for tile/flooring, mastic, or both
**ACM status assumed due to ACM tile/flooring, mastic,
or both attached to this tile/floor material

Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard) Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority)



6.3 BUILDING ROOO2

Facility:

Spokane USARC - Mann Hall

Inspection Date:

10 November 1993

Inspectors:

John Ambrose and Bill Dewey

Survey Contractors:

AGI

6.3.1 Building Description and Use

Building R0002 is a one-story vehicle maintenance facility with offices and storage rooms.

6.3.2 Survey Results

The only suspected ACMs found during the inspection were insulated metal doors.

Insulated Metal Doors: Insulated metal doors (eight total) are assumed from our observations to contain ACM (assessment SPK-R0002-01).

Wallboard/Lath and Plaster Walls: Wood or metal frame walls and ceilings, covered by either wallboard or lath and plaster, were inspected, and no suspected ACMs were visible. Wall materials such as wallboard, joint compound, and plaster, however, may contain asbestos, and walls may have been repaired or renovated in unidentified areas using ACMs. It is therefore impracticable to obtain representative samples of these materials even by sampling all individual walls and ceilings, which was not done for this survey. Because confirmatory samples were not collected, all individual walls and ceilings should be considered as potentially containing ACMs. Prior to any future repair, renovation, demolition, or other maintenance activities involving any wall or ceiling, fully penetrating core samples of wall/ceiling materials must be collected and analyzed to protect human health and the environment.

Roof: The roof and associated HVAC equipment were inspected, and no suspected ACMs were visible. Because destructive sampling may cause irreparable roof damage, confirmatory samples of all roofing materials were not collected and the roof should be considered as potentially containing ACMs (particularly in tar and roofing cement). Prior to any future repair, renovation, demolition, or other maintenance activities involving the roof, fully penetrating core samples of roofing materials must be collected and analyzed to protect human health and the environment.

Sample Location Key

Sample /Assessment Number

(Shading denotes positive ACM results)

RTN-00420-01A Brown FT #100 SF

Color/ Description Quantity: LF = linear feet

Sample Location on

SF = square feet CF = cubic feet

Plan

Ea = each

Legend **Extent of Asbestos-Containing** Material (ACM)

ACM - Floor/Floor-Mounted Equipment



ACM - Ceiling/Ceiling-Mounted Equipment



ACM - Floor & Ceiling



ACM - Sprayed-on Ceiling



ACM - Wall



ACM - Pipe Insulation (Horizontal Run)



ACM - Pipe Insulation (Vertical Riser)



ACM-Assumed Insulated Metal Door

Homogeneous Material Code

AC Acoustical Material

ΒI Boiler Insulation

CA Caulking/Putty

CB Cement Asbestos Board

(Transite)

CP Cement Asbestos Pipe

CT Ceiling Tile

CV Cove Base

DP **Duct Paper**

Exterior Siding Tile ET

EW Electrical Wire/Switch

Insulation

Flexible HVAC Connector FC

FP Fireproofing

Floor Soundproofing FS

FT Floor Tile Gaskets GA

IN Spray-in Wall Insulation

JC Joint Compound

Linoleum (Vinyl Sheet) Flooring LN

MA Mastic

Other Miscellaneous Material MI

Mortar MT PA Paint

PC Popcorn Ceiling Material

PF Pipe Fitting Insulation

Ы Pipe Insulation

PL Plaster

RM Roofing Material

Other Surfacing Material SM

Tank Insulation TΙ

TP Tar Paper

Wallboard WB

WP Window Putty/Glazing

fl201leg.PM5

Asbestos Survey Classification System

Fort Lewis DEH/Asbestos Surveys Washington and Oregon

PROJECT NO. 14,340.201 DRAWN KM

DATE 13 April 94 APPROVED

REVISED

SPK-R0002-01 Metal Doors 8 Ea Note
4 metal doors are
also located in
interior structure.

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ACM and Sample Locations for Building R0002

Fort Lewis DEH/Asbestos Surveys
Spokane USARC
Spokane, Washington
MNN 13 April 94

DPAWN -Σ

PROJECT NO.-14,340.201

TECHNOLOGIES

FTLEWBDR.PM5

DATE -

FIGURE

Reference: Directorate of Engineering and Housing, Ft. Lewis, WA, Custodial Services Plan

Ft. Lewis/DEH/Asbestos Surveys	Project Number 14,340.201	Spokane USARC	R0002	11/10/93
Project Name	umber			

	STUB Sumin	John John State of the State of
John Ambrose	Bill Dewey	Scott Adamek
spectors		ect Task Manager

HOMOGENEOUS MATERIAL

Assessment Number SPK-R0002-01	Miscellaneous	Description - General Metal Doors	Description - Detailed Insulated metal doors	Total Quantity 8 Each	Friable	Air Plenum No	ACM Status Assumed	Hazard Ranking 1	Removal Priority 7	AHERA Category	Emergency? No	Comments
2-01	Sno	S. C. C. C. C. C. C. C. C. C. C. C. C. C.	letal doors									

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	Same Pander - One Time				
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CF = Cubic Feet	EA = Each
LF = Linear Feet	SF = Square Feet
Notes:	

윤

ND = Not Detected NS = Not Sampled

NA(IS) = Not Analyzed due to Insufficient Sample

NA = Not Analyzed

**ACM status assumed due to ACM tile/flooring, mastic, or both attached to this tile/floor material *ACM status confirmed for tile/flooring, mastic, or both

> Removal Priority Ranking: 7 (Low Priority) to 1 (Highest Priority) Hazard Ranking: 1 (Low Hazard) to 7 (Significant Hazard)



APPENDIX A

Analytical Results

Amendment

Reference: Analytical Technologies, Inc.

Bulk Asbestos Sample Analysis Report

Dated 24 Nov 93 Accession 311467

The following report prepared by Analytical Technologies, Inc. and attached chain-of custody form for bulk asbestos samples collected at the Spokane USARC (Mann Hall) indicate an incorrect sample date. The correct date on which samples were collected, which is used in the asbestos survey report, is shown below:

Incorrect Sample Date

Correct Sample Date

12-Nov-93

10-Nov-93

RECEIVED

NOV 2 9 1993

APPLIED GEOTECHNOLOGY INC.

SIGNATURE PAGE

Reviewed by:

Client:

APPLIED GEOTECHNOLOGY INC

BELLEVUE, WASHINGTON

Project Name:

FORT LEWIS DEH/ASBESTOS

Project Number:

14340.201

Project Location:

SPOK MAIN HALL

Accession Number:

311467

Project Manager:

S.J. PENOYAR

Sampled By:

J. AMBROSE

(0) Page 1 Date 24-Nov-93

Departmental Approval

Accession:

Client:

Project Number:

Project Name:

Project Location:

311467

APPLIED GEOTECHNOLOGY INC

14340.201

FORT LEWIS DEH/ASBESTOS SPOK MAIN HALL

Department: Supervisor: INDUSTRIAL HYGIENE John D. Meade

This data package has been reviewed and approved by:

Date:

Accession: Client: Project Number: Project Name: Project Location: Test: Matrix:	APPLIED GEOTECHNOL 14340.201 FORT LEWIS DEH/ASB : SPOK MAIN HALL TOTAL FIBROUS ASBE BULK	ESTOS	• · ·		
Lab Sample Id Date	Analysis Date	Client Sample	Id	• ·	
001 12-NOV-93 002 12-NOV-93 003 12-NOV-93 004 12-NOV-93 005 12-NOV-93	1415 19-NOV-93 1420 19-NOV-93 1425 19-NOV-93	SPK R0001-01A SPK R0001-01B SPK R0001-01C SPK R0001-01D SPK R0001-01E			<u>.</u>
Components	Laboratory Id: 001	. 002	003	004	005
TOTAL FIBROUS ASS	BESTOS (%) ND	ND	ND .	ND	ND
CELLULOSE FIBERS GLASS FIBERS (%) BINDER (%) PAINT (%)	(%) 1 90 8 1	1 90 8 1	1 90 8 1	1 90 8 1	1 90 8 1
UNIFORMITY SAMPLE COLOR. SAMPLE COLOR.	L W W	L W W	L W W	L W W	L W W

Proje	t: ct Number: ct Name: ct Location:	311467 APPLIED GEOTECHNOL 14340.201 FORT LEWIS DEH/ASB SPOK MAIN HALL TOTAL FIBROUS ASBE BULK	ESTOS			
Lab Id	Sample Date	Analysis Date	Client Sample Id	l North	• •	
006 007 008 009 010	12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93	1430 19-NOV-93 1435 19-NOV-93 1435 19-NOV-93	SPK R0001-02A-T SPK R0001-02A-M SPK R0001-02B-T SPK R0001-02B-M SPK R0001-02C-T	*		
Com	ponents	Laboratory Id: 006	007	008	009	010
CHRYS	OTILE ASBEST	ros (%)	<1			•
TOTAL	FIBROUS ASE	BESTOS (%) ND	<1	ND	ND	ND
TILE MASTI		(%) 100	99	100	100	100
SAMPL	RMITY E COLOR. E COLOR	U	L T B	U T	UT	T

Remarks:

OO7 Asbestos is only located in traces of black mastic adhering to tan mastic.

311467

Projec	t Number: t Name: t Location	APPLIED GEOTECH 14340.201 FORT LEWIS DEH/ : SPOK MAIN HALL TOTAL FIBROUS A BULK	ASBESTO	s			
Lab Id	Sample Date	Analysis Date	Cli	ent Sample Id	•	:	
011 012 013 014 015	12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93	1520 19-NOV-9 1520 19-NOV-9 1510 19-NOV-9	3 SPK 3 SPK 3 SPK	R0001-02C-M R0001-03A-T R0001-03A-M R0001-04A-T R0001-04A-M			·
Comp	ponents	Laboratory Id:	011	012	013	014	 015
TOTAL	FIBROUS AS	BESTOS (%)	ND	ND	ND	ND	ND
MASTIC RUBBER	C (%) ROID (%)		100	100	100	100	
SAMPLE UNIFOR	E COLOR. RMITY		T	M U	T	B U	•

Remarks:

015

Sample SPK R0001-004A-M is not present in sufficient quantity for analysis.

Accession: Client: Project Number: Project Name: Project Location: Test: Matrix:	311467 APPLIED GEOTECHNOL 14340.201 FORT LEWIS DEH/ASB SPOK MAIN HALL TOTAL FIBROUS ASBE BULK	ESTOS	•		
Lab Sample Id Date	Analysis Date	Client Sample Id	•	• •	
017 12-NOV-93		SPK R0001-05A-T SPK R0001-05A-M SPK R0001-06A-T SPK R0001-06A-M SPK R0001-06B-T			
Components	Laboratory Id: 016	017	018	019	020
CHRYSOTILE ASBEST	OS (%)		15	20	
TOTAL FIBROUS ASE	BESTOS (%) ND	ND	15	20	ND
RUBBEROID (%) MASTIC (%) TILE COMPONENTS (100	100	85	80	•
UNIFORMITY SAMPLE COLOR.	Ü G	U T	u BR	U B	

Remarks:

020

Client requested no analysis.

Accession:

311467

Client:

APPLIED GEOTECHNOLOGY INC

Client:
Project Number: 14340.201
Project Name: FORT LEWIS DEH/ASBESTOS
Project Location: SPOK MAIN HALL
TOTAL FIBROUS ASBESTOS (%)

Lab Id	Sample Date	•	Analysis Date	Client Sample I	đ	*	
021 022 023 024 025	12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93	1355 - 1355 1305	19-nov-93 19-nov-93 19-nov-93 19-nov-93 19-nov-93	SPK R0001-06B-M SPK R0001-06C-T SPK R0001-06C-M SPK R0001-07A-T SPK R0001-07A-M			
Comp	ponents	Laborat	ory Id: 021	. 022	023	024	025
CHRYSO	OTILE ASBEST	ros (%)				5	15
TOTAL	FIBROUS ASI	BESTOS (%) ND	ND	ND	5	15
TILE (COMPONENTS (%)	(%)				95	85
SAMPLE UNIFOR	E COLOR. RMITY				•	B U	B

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Remarks:

Client requested no analysis. Client requested no analysis. Client requested no analysis. 021 022 023

Accession: Client: Project Number Project Locate Test: Matrix:	FORT LEWIS DEH/AS	SBESTOS	•		
Lab Sample Id Date	Analysis Date	Client Sample Id	4	•	
028 12-NO\ 029 12-NO\	7-93 1310 19-NOV-93 7-93 1310 19-NOV-93 7-93 1450 19-NOV-93 7-93 1450 19-NOV-93 7-93 1455 19-NOV-93	SPK R0001-07B-T SPK R0001-07B-M SPK R0001-08A-T SPK R0001-08A-M SPK R0001-08B-T			
Components	Laboratory Id: 02	26 027	028	029	030
CHRYSOTILE AS	SBESTOS (%)		3	15	
TOTAL FIBROUS	S ASBESTOS (%) NO	D ND	3	15	ND
TILE COMPONED MASTIC (%)	TTS (%)	· · · · · · · · · · · · · · · · · · ·	97	85	
UNIFORMITY SAMPLE COLOR			U T	U B	
Remarks:					:
026 027 030	Client requested no an Client requested no an Client requested no an	nalysis.			

[0) Page 8 Date 24-Nov-93

Projec	t: APF ct Number: 143 ct Name: FOR ct Location: SPO TOT	467 LIED GEOTECHNO 40.201 T LEWIS DEH/AS K MAIN HALL AL FIBROUS ASE	BESTOS
Lab	Sample	Analysis	Client Sample Id
Id	Date	Date	
031	12-NOV-93 1455	7 19-NOV-93	SPK R0001-08B-M
032	12-NOV-93 1458		SPK R0001-08C-T
033	12-NOV-93 1458		SPK R0001-08C-M

Components Laboratory Id: 031 032 .033

TOTAL FIBROUS ASBESTOS (%)

ND

ND

ND

Remarks:

O31 Client requested no analysis.
O32 Client requested no analysis.
O33 Client requested no analysis.

[0] Page 9 Date 24-Nov-93

Asbestos Supplemental Information Page

SAMPLE TYPE: BULK Analyses are performed using polarized light microscopy and dispersion staining according to the U.S. EPA's Interim Method for the Determination of Asbestos in Bulk Insulation Samples (EPA-600/M4-82-020, 1982). Volumetric percentages are determined by visual estimation. Sample colors determined by the analyst may be different from those observed by the sample collector at the collection site, due to differences in lighting.

LEGEND:

NS = Not Submitted ND = Not Detected

U = Uniform L = Layered N = Nonuniform nonlayered

B = Black B = Beige BL = Blue BR = Brown CO = Copper G = Gray

GL = Gold Gr = Green I = Ivory O = Orange P = Pink R = Red SL = Sil
ver T = Tan V = Violet W = White Y = Yellow C = Clear OP = Opaque

S = Streaked SP = Spotted M = Multicolored UA = Unable to Ascertain

D = Dirty or discolored

This report may not be reproduced except in full without written approval from Analytical Technologies, Inc. This report applies only to the samples analyzed. ATI is accredited by the U.S. National Institute of Standards and Technology under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos fiber analysis (Laboratory ID No. 1250).

CHAIN-OF-(STOPY

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Ap I Geotechnology Inc. Geotectinical Engineering Geology & Hydrogeology

PROJECT INFORMATION La	Laboratory Number:	nber:				
			ANALYSIS REQUEST	EQUEST		
RATCEWIS DENTASSESTED	PETROLEUM HYDROCARBONS	ORGANIC COMPOUNDS	PESTS/PCB's	8 METALS	LEACHING	отнев
Site Location:	8015M 418.1 TPH S TPH-0	B040 F 8310 F 8270 C 8240 C 8020M 8020 / 8010 F	8150 0 8140 0 8080M 8080 0	DWS - Priority TCL M Organ Total L Select DWS -	TCLP TCLP TCLP TCLP MFSP	NUMB
	Sta Speci	Phen- HPLC GCM GCM 4 - BE Arom Halog	OC H OP P I PCI OC P	Met / Poli letals ic Le .ead ed m	- Pes - Ser - Voi	ERC
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Disposal Method:	struc	Hs mive iatile only	ides ides nly PCBs	tais	atile:	ONT
Disposed by: Disposal Date:	tions	ol. es	S		iE)	AINE
QC INFORMATION (check one)	i					ERS
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SAMPLE ID DATE TIME MATRIX LAB ID					-	
SPK-12001 - 014 1/1/2 1410 ASBESTES						7
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LAB INFORMATION SAMPLE RECEIPT	L	RELINQUISHED BY: 1.	\vdash	RELINQUISHED BY: 2.	RELINQUISHED BY:	HED BY: 3.
Lab Name: A T T Total Number of Containers:	14	Signalarie: O.	Time: Signature:	Time:	Signature:	Тіте:
Lab Address: YN/NA		η,	Date; Printed Name:	me: Date:	Printed Name:	Date:
Intact?: Y/N/NA		J. AlmBROIL 1	111963			
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		Company:	Company:		Сотрапу:	

DISTRIBUTION: While, Canary to Analytical Laboratory; Pink to AGI Project Files; Gold to AGI Disposal Files

Tacoma: (206) 383-4380 Pleasanton: (415) 460-5495

AGI OFFICES: Bellevue: (206) 453-8383 Portland: (503) 222-2820

App Geotechnology Inc. Geotechnical Engineering Geology & Hydrogeology

CHAIN-OF-C TODY _Page_2

PROJECT INFORMATION	TION		Laboratory Number:	ımber:							
Project Manager: 5 PENOYAN	الح				A	NALYSI	ANALYSIS REQUEST	ST			
22.958 51	FATTE	VIS CO	(PETROLEUM HYDROCABBONS		ORGANIC COMPOUNDS	PESTS/PCB's	S,BC	METALS	LEAC	LEACHING OTHER	
Site Location: SPJK 1440 CO	740 CO (TPH	418. TPH TPH	8020 8020 8010	8040 8310 8270	8080	Sele	Prior TCL Orga	TCL MFS	TCL	NUM
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+	1445 -1									X	
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Lab Address:	Chain of Custody Seals: Y	Seals: Y/N/NA		Pyfitter Name:	\$ 43 3	lg: Printe	Printed Name:	Date:	: Printed Name:	ате:	Date:
	Intact?: Y/N/NA			9	nBP6611	200					
Via: CAR/EN	Received in Good Condition/Cold:	Condition/Col	ij:	Company:	16Z.	Сомрапу:	any:		Сощрану		
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ď	•			Сомрвпу:	471	Company:	any:		Сомрапу:		
AGI OFFICES: Bellevue: (206) 453-8383 Taco	Тасота: (206) 383-4380		DISTR	IBUTION: Whi	DISTRIBUTION: White, Canary to Analytical Laboratory, Pink to AGI Project Files; Gold to AGI Disposal Files	nalytical La	boratory; Pl	nk to AGI Pro	ject Files; (Gold to AGI Dis	oosat Files

Tacoma: (206) 383-4380 Pleasanton: (415) 460-5495 AGI OFFICES: Bellevue; (206) 453-8383 Portland; (503) 222-2820

Hev. 4/92

Ap i Geotechnology Inc.
Geology & Hydrogeology

CHAIN-OF-(STODY Date 11/12/93 Page 3 of 5

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PROJECT INFORMATION	Laboratory Number:	lumber:			.c	
FU UYAN		AN	ANALYSIS REQUEST]
1030) 751	M (PETROLEUM HYDROCARBONS	ORGANIC COMPOUNDS	PESTS/PCB's METALS	LEACHING	отнев	
Site Location: Size K / WWW King Sampled By:	TPH-S TPH-G TPH-II	8080 C DWS - 8040 F 8310 F 8270 G 8240 G 8020M 8020 A 8010 F 8015M	Priority TCL M Organi Total L Selecte DWS - 8150 C 8140 C	TCLP TCLP TCLP TCLP MFSP DWS	NUMB	
DISPOSAL INFORMATION	Special St St	- Vola Phen- HPLC GCM GCM 4 - BE Arom Halog	letals ic Le Lead led m Her DC H DP P	- Pes - Ser - Vol - Met		
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Total Numb	iners:	Signaturi:	Signature:	Time: Signature:	Тіте:	
Lab Address: Y/N/NA	s: Y/N/NA	Kripsed Narge: Date,	Printed Name:	Oale: Printed Name:	Date:	1
Intact?: Y/N/NA	-	1113019WY	7			1
Via: (7) Let Received in Good Condition/Cold:	dition/Cold:	Company:	Company:	Company:		
Turn Around Time: (世名tandard 日24 hr. 日48 hr. [□72 hr. □1 wk.	BECFIVED BY: // 1	RECEIVED BY:	2. RECEIVED	ВУ: 3.	
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Special Instructions:)	Chillied Name:	Printed Name:	Date: Printed Name:	Date:	
G		Company:	Сотралу:	Company:		
AGI OFFICES: Bellevue: (206) 453-8383 Tacoma: (206) 383-4380 Portland: (503) 222-2820 Pleasanton: (415) 460-5495	ISIO	DISTRIBUTION: White, Canary to Analytical Laboratory; Pink to AGI Project Files; Gold to AGI Disposal Files Rev. 4/92	lytical Laboratory; Pink to AGI	Project Files; Gold to	AGI Disposal Files Rev. 4/92	95 95

Ap I Geotechnology Inc. Geotechnical Engineering Geology & Hydrogeology

CHAIN-OF-(STODY,

PROJECT INFORMATION	NOI.	Laboratory Number:	nber: 🔾	•		
Project Manager: S. FMOYM	, ,	garage Rich	O AN	ANALYSIS REQUEST	,	
1	KNICONS	PETROLEUM HYDROCARBONS	ORGANIC COMPOUNDS	PESTS/PCB's METALS	LEACHING TESTS	отнея
Site Location: SPAR, WANNO KAY Germpled By: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Method: Disposal Date: DISW-846	Decial LAB ID	8015M 418.1 State: TPH Special Instructions TPH-D State: TPH-G State: TPH-ID State:	8080 OC Pest/PCBs DWS -Volatiles and Semivol. 8040 Phenols 8310 HPLC PAHs 8270 GCMS Semivol. 8240 GCMS Volatiles 8020M - BETX only 8020 Aromatic VOCs 8010 Halogenated VOCs	DWS - Metals Priority Poll. Metals (13) TCL Metals (23) Organic Lead (Ca) Total Lead (Wa) Selected metals: list DWS - Herb/pest 8150 OC Herbicides 8140 OP Pesticides 8080M PCBs only	TCLP - Metals TCLP - Pesticides TCLP - Semivolatiles TCLP - Volatiles (ZHE) MFSP - Metals (Wa)	NUMBER OF CONTAINERS
LAB INFORMATION	SAMPLE RECE	ECEIPT #	RELINQUISHED BY: 1	RELINQUISHED BY: 2.	RELINQUISHED	1ED BY: 3.
	Total Number of Containers:		Signaphre: DR Time:	Signature: Time:	Signature:	Time:
Lab Address:	Chain of Custody Seals: V/N/NA	ν, co.	Printed Name: Date:	Printed Name: Oate:	Printed Name:	Date:
Via: Curk 21	Received in Good Condition/Cold:	, care	Company	Сотрапу:	Сотралу:	
n Around Time: (XXStandard	□24 hr. □48 hr. □72 hr.	1 wk.	AEGEIVED BY: 1	RECEIVED BY: 2.	RECEIVED	ВҮ: 3.
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			Company:	Company:	Сотрапу:	-
		1000	A TAN THE COURT OF THE PARTY OF			Ol Disposal File

Tacoma: (206) 383-4380 Pleasanton: (415) 460-5495

AGI OFFICES: Bellevue: (206) 453-8383 Portland: (503) 222-2820

Rev. 4/92

CHAIN-OF-(STODY

Ap | Geotechnology Inc. Geotechnical Engineering Geotogy & Hydrogeology

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Tacoma: (206) 383-4380 Pleasanton: (415) 460-5495

Rev. 4/92

Amendment

Reference: Analytical Technologies, Inc.

Bulk Asbestos Sample Analysis Report

Dated 30 Mar 94 Accession 403637

The following report prepared by Analytical Technologies, Inc. and attached chain-of custody form for bulk asbestos samples collected at the Spokane USARC (Mann Hall) indicate an incorrect sample date. The correct date on which samples were collected, which is used in the asbestos survey report, is shown below:

Incorrect Sample Date

Correct Sample Date

21-Feb-94

21-Mar-94

RECEIVED

SIGNATURE PAGE

APR - 1 1994

APPLIED GEOTECHNOLOGY INC.

Reviewed by:

APPLIED GEOTECHNOLOGY INC

BELLEVUE, WASHINGTON

Project Name:

Client:

FORT LEWIS/DEH/ASBESTOS SURVEYS

Project Number:

14340.201

· Project Location:

SPOKANE (MANN)

Accession Number: 403637

Project Manager:

S. PENOYAR

Sampled By:

J. M. AMBROSE

[0] Page 1 Date 30-Mar-94

Departmental Approval

Accession:

Client:

Project Number: Project Name:

Project Location:

403637 APPLIED GEOTECHNOLOGY INC

14340.201

FORT LEWIS/DEH/ASBESTOS SURVEYS SPOKANE (MANN)

Department:

Supervisor:

INDUSTRIAL HYGIENE John D. Meade

This data package has been reviewed and approved by:

Homes P. B	unshalle		Date:	30 MR 94	
	1	11		•	
Analyzed by: -	185	<u>- G.</u>	Movate	·	•
		<u> </u>			

Accession: Client:

403637

APPLIED GEOTECHNOLOGY INC

Project Number: 14340.201
Project Name: FORT LEWIS/DEH/ASBESTOS SURVEYS
Project Location: SPOKANE (MANN)
Test: TOTAL FIBROUS ASBESTOS (%)
Matrix: BULK

Lab Id	Sample Date		Analysis Date	Client Sample I	đ		
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[0) Page 3 Date 30-Mar-94

Accession: 403637
Client: APPLIED GEOTECHNOLOGY INC
Project Number: 14340.201
Project Name: FORT LEWIS/DEH/ASBESTOS SURVEYS
Project Location: SPOKANE (MANN)
Test: TOTAL FIBROUS ASBESTOS (%)

Matrix:

BULK

1100-1									
Lab Id	Sample Date		Analysis Date		Client Sample	e Id	÷		•
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Page Date 3/

Api Geotechnology Inc. Geotechnical Engineering Geology & Hydrogeology

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Тасота: (206) 383-4380 Рівазаптоп: (415) 460-5495 AGI OFFICES: Bellevue: (206) 453-8383 Porlland: (503) 222-2820

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Geotechnology Inc.

Geotechnical Engineering Geology & Hydrogeology

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NUMBER OF CONTAINERS က lime: က Firme: Dato: Date: RELINQUISHED BY: B RECEIVED TCLP - Metals LEACHING Printed Namo: Printed Name: TCLP - Pesticides Signature: Company: Signature: TCLP - Semivolatiles TCLP - Volatiles (ZHE) MFSP - Metals (Wa) તં DWS - Metals તાં Time: Oate: Dale: Priority Poll. Metals (13) RELINQUISHED BY: METALS TCL Metals (23) Organic Lead (Ca) **ANALYSIS REQUEST** RECEIVED BY: Total Lead (Wa) Selected metals: list Printed Name: Printed Name: DWS - Herb/pest PESTS/PCB's Signature: 8150 OC Herbicides 8140 OP Pesticides 8080M PCBs only 7 Milling 200 RELINQUISHED BY: 1. 8080 OC Pest/PCBs ORGANIC COMPOUNDS DWS - Volatiles and Semivol 8040 Phenois TAMBLUSE 8310 HPLC PAHs RECEIVED BY: 8270 GCMS Semivol. 8240 GCMS Volatiles 8020M - BETX only Company: 8020 Aromatic VOCs Laboratory Number 8010 Halogenated VOCs PELHULEUM ; HYDROCARBONS 8015M PETROLEUM 418.1 State: ___¥ **TPH Special Instructions** TPH-D State: TPH-G State: PRIOR AUTHORIZATION IS REQUIRED FOR RUSH DATA SAMPLE RECEIPT Received in Good Condition/Cold: TPH-ID State Chain of Custody Seals: Y/N/NA ☐72 hr. LAB ID Total Number of Containers: 20132513X SPUPANE MALABampled By: JMA □Special (\$\hat{\$\hat{\angle}}\)24 hr. □ 48 hr. ASBEST! MATRIX Intact?: Y/N/NA FAGI Std. N307 QC INFORMATION (check one) Disposal Date: **DISPOSAL INFORMATION** ☑Lab Disposal (return if not indicated) 12/2/ PROJECT INFORMATION TIME 330 339 名からなる □ Screening 123 Special Instructions: T= TILE □ Standard DATE LAB INFORMATION 3 あること STCP. O3BP -Roov 1 -4/C -RODOI-B3C Row (- 838) PEN Turn Around Time: SAMPLE ID Disposal Method: Project Manager: Project Number: Project Name: Site Location: Disposed by: □SW-846 Lab Address: > Lab Name:) SPH N.E. <u>Ş</u>

Pleasanton: (415) 460-5495 Tacoma: (206) 383-4380 AGI OFFICES: Bellevue: (206) 453-8383 Portland: (503) 222-2820

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Сопрапу:

Сотрапу:



APPENDIX B

Analytical Laboratory Accreditation

United States Department of Commerce National Institute of Standards and Technology

Certificate of Accreditation

ANALYTICAL TECHNOLOGIES, INC. PENSACOLA, FL.

for salisfactory compliance with criteria established in Title 15. Part 7 Code of Federal Regulations. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for: is recognized under the National Voluntary Laboratory Accreditation Program

BULK ASBESTOS FIBER ANALYSIS

THERE SO WITH THE STATE OF THE

For the National Institute of Standards and Technology

October 1, 1994

Esfective until

OCCUPATIONAL HEALTH AND SAFETY THE DEEP SOUTH CENTER FOR CERTIFIES THAT

Suzanne Moowiak

Has Attended and Satisfactorily Passed An Examination For SAMPLING AND ANALYSIS OF ASBESTOS MATERIALS Birmingham, Alabama July 25 - 29, 1988

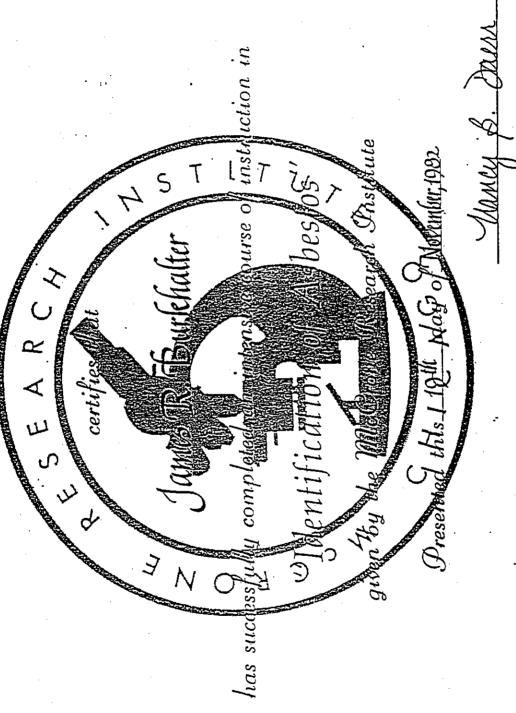
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COURSE INSTRUCTOR

PROGRAM DIRECTOR

A NIOSH-Supported Educational Resource Center University of Alabama at Birmingham and Auburn University

McCRONE RESEARCH INSTITUTE



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United States Department of Commerce National Institute of Standards and Technology

Certificate of Accreditation

PREZANT ASSOCIATES, INC. SEATTLE, WA

for satisfactory compliance with criteria established in Title 15, Part 7 Code of Federal Regulations. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for: is recognized under the National Voluntary Laboratory Accreditation Program

BULK ASBESTOS FIBER ANALYSIS



January 1, 1994 Effective until

For the National Institute of Standards and Technology

execute of Complexis

This is to certify that

Asya Oganyan fjas satisfactorify completed 16 weeks of training in **Bulk Asbestos Fiber Analysis**

Date July 8, 1992

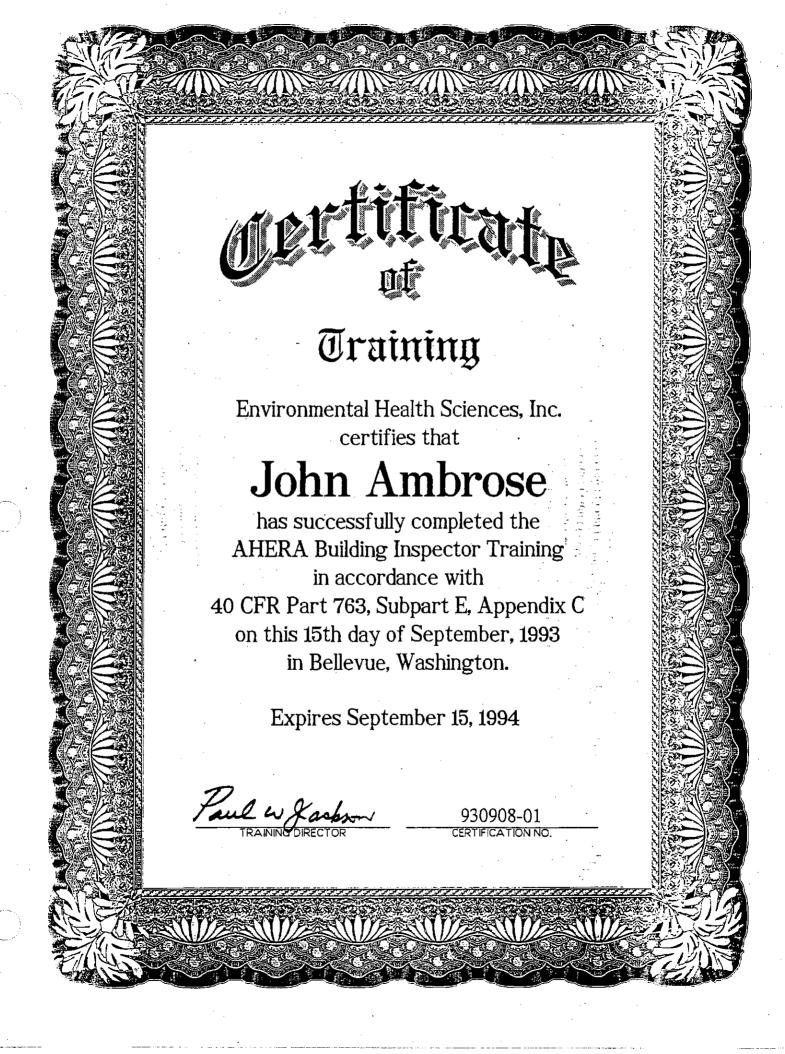
Training Coordinator





APPENDIX C

Inspector Accreditation





Training

Environmental Health Sciences, Inc. certifies that

William C. Dewey

has successfully completed the
AHERA Building Inspector
Training Refresher in accordance with
40 CFR Part 763, Subpart E, Appendix C
on this 7th day of September, 1993
in Bellevue, Washington.

Expires September 7, 1994

TRAINING DIRECTOR

930902-10

THERMATECH NORTHWEST, INC.

GOOD FAITH ASBESTOS SURVEY

PREPARED FOR:

TROY ALEXANDER

Centennial Contractors, Inc. PO Box 3277 Post Falls, ID 83877

LOCATION OF SURVEY:

4415 North Market Street Spokane, WA 99207



TTNW #SV030325 Report Date: March 27, 2003

PERFORMED BY:

Robert J. Guiley
AHERA Certification #03-118
Expiration Date January 17, 2004

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Basic Construct Heating & Ven Plumbing Syst Electrical Syste	tilation System em	1-2
METHODOLOGY	/ LABORATORY INFORMATION	3
SAMPLE DATA		4-6
SUMMARY OF M	ATERIALS FOUND POSITIVE	7
DEFINITIONS		8
CONCLUSIONS		9
APPENDICES: Appendix A: Appendix B: Appendix C: Appendix D:	Inspector's Certification Field Data/ Laboratory Results Sample Location Plan Specific Material Locations	

SCOPE OF WORK

On March 17, 2003 Robert J Guiley conducted a "Good Faith" asbestos survey (per U.S.E.P.A / A.H.E.R.A. guidelines as designated by *Puget Sound Air Pollution Control Agency*) of the United States Army Reserve Center, known as Mann Hall, located at 4415 North Market Street, Spokane, WA 99207. Field inspection, data collection and report generation were based on the following Scope of Work:

- Perform visual inspection to identify and inventory all accessible suspect-asbestos containing materials.
- Bulk sampling and analysis of all identified suspect asbestoscontaining materials.
- Provide written report.

The original facility was constructed In the 1950's, with an addition added in the 1970's. Since then the basement firing range in the main building has been replaced with offices. The motor pool offices have been remodeled within the last ten years. The main building is the facility headquarters with multiple classrooms, medical wing, storage areas, numerous offices and an assembly room. The motor pool has multiple offices, storage areas and vehicle service bays.

To date one other asbestos survey has been performed. AGI technologies performed an asbestos survey in 1993. Three of the confirmed samples from their survey are acknowledged in this survey.

BASIC CONSTRUCTION:

The structure is a two story, operating Army Reserve Center with basement. The exterior of the building is decorative brick over CMU building block. The roof is built-up roofing. The roof has been recently replaced. The windows are aluminum framed with single pane glass. The main lobby windows are built into a solid aluminum frame.

HEATING & VENTILATION SYSTEM:

A hot water heating system supplies heat to the building. The boiler room and piping have been abated. There may, however, be some pipe insulation in the walls. Care must be taken to watch for any pipe insulation when any destructive demolition is being done.

PLUMBING SYSTEM:

The plumbing system is a combination of galvanized and copper pipe. Some of the pipes are insulated with fiberglass.

ELECTRICAL SYSTEM:

The electrical system consists of single wire through conduit. There are several breaker boxes in the boiler room.

INTERIOR CONSRTUCTION, FINISHES & FLOORING:

The interior walls are a combination of painted building block and wallboard on metal and wood framing. The floors are covered with Vinyl tile. The floors of the second floor are hardwood. The processing room of the X-Ray department is finished with ceramic tile.

SAMPLE METHODS AND LABORATORY INFORMATION

A walk- through inspection of all areas was performed to identify which building materials may have the potential for containing asbestos.

After identifying the suspect asbestos-containing materials, bulk samples were collected, placed in plastic bags, numbered and recorded. Care was taken to clean all tools between sampling in order to avoid cross-contamination. The samples and appropriate chain of custody forms were then sent to Orion Laboratories to be analyzed for the type and content of asbestos, if any. The samples were analyzed using Polarized Light Microscopy (PLM) Stain Dispersion Technique in accordance with EPA METHOD 600/R-93/116

It must be noted that the structure surveyed is an operating military facility. Care was taken while collecting the samples to avoid being a hindrance to the operation. All areas requiring destructive sampling were sealed and encapsulated. Destructive methods were used to gain access to suspect materials, however there may be additional materials hidden in inaccessible and sensitive areas.

The following section contains tables listing all materials sampled by location, description, type, asbestos percentage (if any) category, and results of materials sampled.

ASBESTOS SAMPLE DATA

Project: 4415 North Market Street, Spokane, WA 99207

SV030325 March 27, 2003

Quantity Square Feet													
Asbestos Type/%	Chrysotile 3%	Chrysotile 2% <1% Tremolite	Chrysotile 3%	Non Detected	Chrysotile 2%	Non Detected	Non Detected	Non Detected	Chrysotile 40%	Non Detected	Chrysotile 2% <1% Tremolite	Chrysotile 2% <1% Tremolite	Non Detected
Description	Pink Tile/Mastic	Cream, Tan Tile/Mastic	Glue Dots	Ceiling Tile	Tan/Brown 12x12 Tile/Mastic	2'x4' Ceiling Panels	Dark Brown Cove Base Mastic	Brown/Tan 12x12 Tile/Mastic	Vibration Damper	Dark Brown Cove Base Mastic	Dark Brown Cove Base Mastic	Dark Brown Cove Base Mastic	Red Quarry Tile
Category	Non Friable	Non Friable	Non Friable	Friable	Non Friable	Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Non Friable	Non Friable
Location	Chaplain - 168/283	Break Area -160-170	Hall Medical Wing	Hall Medical Wing	Administration Area	Main Hall original Building	Administration Area	Equipment Room	Equipment Room	Kitchen	Training Room	Assembly Hall	Kitchen
Sample #	M-1	M-2	M-3	M-4	M-5	M-6	M-7	M-8	6-W	M-10	M-11	M-12	M-13

ASBESTOS SAMPLE DATA

Project: 4415 North Market Street, Spokane, WA 99207

SV030325 March 27, 2003

Quantity Square Feet													
Asbestos Type/%	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Chrysotile 40 %	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected
Description	Paneling Mastic	Glazing	GWB & Joint Compound	GWB & Joint Compound	GWB & Joint Compound	Vibration Damper	Black Caulking	Gray Caulking	Interior White Insulation	Dark Gray Grout	Tile Adhesive	Slip Sheet Between Floors	Glazing
Category	Non Friable	Non Friable	Non Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Non Friable	Non Friable
Location	Assembly Hall	Mezzanine Windows	Training Room	Administration Area	Medical Area	Assembly Hall	Exterior Training Room Window	Exterior Training Room Window	West Exit Door	X-Ray Processing Room	X-Ray Processing Room	2nd Floor Supply Room	2nd Floor Men's Restroom
Sample #	M-14	M-15	M-16	M-17	M-18	M-19	M-20	M-21	M-22	M-23	M-24	M-25	M-26

ASBESTOS SAMPLE DATA

Project: 4415 North Market Street, Spokane, WA 99207

SV030325 March 27, 2003

Quantity Square Feet								
Asbestos Type/%	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Chrysotile 15 % Chrysotile 20 %	Chrysotile 5% Chrysotile 15%	Chrysotile 3% Chrysotile 15%
Description	Pipe Insulation	GWB & Joint Compound	GWB & Joint Compound	Off White 12x12 Tile	Pipe Insulation	Brown/White/Red Tile & Mastic	Black Tile & Mastic	Off White/brown Tile & Mastic
Category	Friable	Non Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Non Friable
Location	Main Shop	Motor Pool Oil Storage Area	Motor Pool Battery Storage Area	Motor Pool Offices & Rest Rooms	Boiler Room	R001-06 Offices, Classroom, Equipment Room. Janitor Closet	R001-07 X-ray & Hearing Test Room	Medical Area
Sample #	M-27	M-28	M-29	M-30	M-31	R001-06	R001-07	R001-08

SUMMARY OF MATERIALS FOUND POSITIVE

Upon completion of the survey and review of the laboratory data, the following materials found contained asbestos at the structures located at, 4415 North Market Street, Spokane, WA 99207.

- The brown-white-red 9x9 tile and mastic located in the offices, classroom, back portion of the equipment room and the janitor's closet in the hall of the main facility. (Sample #R001-06). (See Appendix D).
- The black tile & mastic located in the X-Ray room and the hearing test room of the medical wing. (Sample #R001-07). (See Appendix D).
- The off-white/brown tile & mastic located in the medical wing. (Sample #R001-08). (See Appendix D).
- The black mastic associated with the pink tile in the Chaplain's office. (Sample #M-1). (See Appendix D).
- The dark brown glue dots associated with the 12x12 ceiling tile located in the medical wing and west-portion of the main hall.
 There is also a small area in the hall to the stair descending to the basement. (Sample #M-3).
- The vibration dampers associated with the ventilation systems located in the assembly hall and the equipment room. (Sample #M-9, M-19).
- The dark brown cove base mastic located throughout the facility. (Sample #M-11, M-12).
- The black mastic associated with the tan-brown tile located in the administration area. (Sample M-5). (See Appendix D).
- No asbestos was found in the motor pool.

DEFINITIONS

Asbestos means the asbestiform varieties of actinolite, amosite (cummingtonitegrunerite), tremolite, chrysotile (serpentinite), crocidolite (riebeckite), or anthophyllite.

Asbestos-Containing Material means any material containing more than one percent (1%) asbestos as determined using the method specified in EOA regulations (Polarized Light Microscopy).

Friable – materials that can be crumbled or reduced to powder by hand pressure.

Homogeneous Areas – an area which appears similar throughout in terms of color, texture, and date of materials application.

Miscellaneous Materials – interior building material on structural components, structural members of fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation (AHERA definition).

Surfacing Material — material that is sprayed-on, troweled- on, or otherwise applied to surfaces, such as acoustical plaster on ceilings, and fireproofing materials on structural members, or other materials o n surfaces for acoustical, fireproofing, or other purposes (AHERA definition).

Thermal System Insulation – means material applied to pipes, fittings, boilers, breeching, tanks, ducts or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

CONCLUSION

Abatement and disposal of asbestos-containing materials must be conducted by a Washington State Licensed Asbestos Abatement Contractor using Washington State Certified Asbestos Abatement Workers. Should employees or contract personnel encounter any suspect asbestos-containing materials, it is their responsibility to:

- · Contact a representative of the owners.
- Consult the inspection report to determine whether or not the suspect material contains asbestos.
- Ensure that all employees and contractors are informed and advised of the location and type of materials that contain asbestos

Any additional hidden or covered suspect materials, discovered during demolition or renovation, that are similar to those identified in this survey must be treated as asbestos-containing materials unless determined otherwise by laboratory analysis.

A copy of this report should be kept on site during any asbestos abatement, renovation, or demolition.

Please contact the undersigned for any further assistance or if any questions or concerns arise relative to this report.

Sincerely,

Robert Guiley

AHERA Building Inspector

Appendix #A

INSPECTOR'S CERTIFICATION

Certificate of Completion

Robert J. Guiley This is to certify that

4 hours of refresher training as a has satisfactorily completed

Building Inspector

in compliance with TSCA Title II AHERA Accredited State of Missouri Training Provider # MO 00-10-025



Exam Date: January 17, 2003

Cert. # 03-118 Conducted at:

Prezant Associates, Inc. Seattle, WA

Exp. Date: January 17, 2004

nstructor: Robert Welch

Other Jole

Prezant Associates, Inc. • 330 Sixth Avenue North, Suite 200 • Seattle, Washington 98109 • (206) 281-8858

FIELD DATA / LABORATORY RESULTS

THERMATECH NORTHWEST INC.

1711 6TH ST S.W. Puyallup, WA 98371

PH: 253-984-1818 FAX: 253-984-1886

DATE: 3/17/2003 CLIENT: Troy Alexander

ADDRESS: Centennial Contractors Ent. Inc.

PO Box 3277

Post Falls, Idaho 83877

FIELD DATA SUMMARY

TTNW JOB#:BSSV030325 INSPECTOR: BOB GUILEY

SITE: NAME ADDRESS;

Mann Hall

4415 North Market Street Spokane, WA 99207-5830

SAMPLE NO.	FLOOR	LOCATION	DESCRIPTION OF MATERIAL
M-1	1	Chaplin - 168/283	Pink Tile/Mastic
M-2	1	Break Area -160-170	Cream,Tan Tile/Mastic
M-3	1	Hall Medical Wing	Glue Dots
M-4	1	Hall Medical Wing	Ceiling Tile
M-5	1	Administration Area	Tan/Brown 12x12 Tile/Mastic
M-6	1	Main Hall original Building	2'x4' Ceiling Panels
M-7	1	Administration Area	Dark Brown Cove Base Mastic
M-8	1	Equipment Room	Brown/Tan 12x12 Tile/Mastic
M-9	1	Equipment Room	Vibration Damper
M-10	1	Kitchen	Dark Brown Cove Base Mastic
M-11	1	Training Room	Dark Brown Cove Base Mastic
M-12	1	Assembly Hall	Dark Brown Cove Base Mastic
M-13	1	Kitchen	Red Quarry Tile
M-14	1	Assembly Hall	Paneling Mastic
M-15	Exterior	Mezzanine Windows	Glazing
M-16	1	Training Room	GWB & Joint Compound
M-17	1	Administration Area	GWB & Joint Compound
M-18	1	Medical Area	GWB & Joint Compound
M-19	Mezz	Assembly Hall	Vibration Damper
M-20	Exterior	Exterior Training Room Window	Black Caulking
M-21	Exterior	Exterior Training Room Window	Gray Caulking
M-22	Door	West Exit Door	Interior White Insulation
M-23	1	X-Ray Processing Room	Dark Gray Grout
M-24	1	X-Ray Processing Room	Tile Adhesive
M-25	2	2nd Floor Supply Room	Slip Sheet Between Floors
M-26	2	2nd Floor Men's Restroom	Glazing
M-27	Shop	Main Shop	Pipe Insulation
M-28	Shop	Motor Pool Oil Storage Area	GWB & Joint Compound
M-29	Shop	Motor Pool Battery Storage Area	GWB & Joint Compound
M-30	Shop	Mpotr Pool Offices & Rest Rooms	Off White 12x12 Tile
M-31	1	Boiler Room	Pipe Insulation
R001-06	1	Offices, Classroom, Eqip. Rm. Jan Cl	Brown/White/Red Tile & Mastic
R001-07	1	X-ray & Hearing Test Room	Black Tile & Mastic
R001-08	1	Medical Area	Off White/brown Tile & Mastic



Orion Environmental Services

NBE W2F5912535

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Telephone Seattle (253) 874-8118 & Tacoma (253) 952-6717 & Facsimile (253) 927-4714 & email ORION6717@aol

Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc.

10312 Sales Road South Lakewood, WA 98449

Invoice Date Received

Date

Page

March 25, 2003

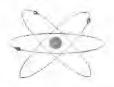
Page 1 of 4

030669 March 18, 2003

Project Number Project Name 03-0325

Mann Hall

Client	Orion		Sample	As	bestos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	<u>Fibers</u>
M-01a	30318-28a	Pink Vinyl Tile Homogeneous	Ash	ND	~	9
M-01b	30318-28b	Mastic Assoc. w/ M-01a	Chloroform	3	Chrysotile	Cellulose
M-02a	30318-29a	Cream Vinyl Tile Homogeneous	Ash	ND	O.	-
M-02b	30318-29b	Mastic Assoc. w/ M-02a	Chloroform	ND	4	Cellulose
M-03	30318-30	Glue Dots Homogeneous	Chloroform	2 <1	Chrysotile Tremolite	Cellulose
M-04	30318-31	Ceiling Tile Homogeneous	Ash	ND	*	Cellulose Fiberglass
M-05a	30318-32a	Tan / Brown Vinyl Tile Homogeneous	Ash	ND	o š o	*
M-05b	30318-32b	Mastic Assoc. w/ M-05a	Chloroform	2	Chrysotile	Cellulose
M-06	30318-33	Ceiling Panel Homogeneous	Ash	ND	3	Cellulose
M-07	30318-34	Cove Base Mastic Homogeneous	Chloroform	ND		Cellulose
M-08a	30318-35a	Brown / Tan Vinyl Tile Homogeneous	Ash	ND	c	.=
M-08b	30318-35b	Mastic Assoc. w/ M-08a	Chloroform	ND	.12	Cellulose
M-09	30318-36	Vibration Damper Homogeneous	1.0	40	Chrysotile	Cellulose



rion Environmental Services

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Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc.

10312 Sales Road South Lakewood, WA 98449

Date Page Invoice March 25, 2003

Page 2 of 4 030669

Date Received

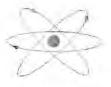
March 18, 2003

Project Number

03-0325

Project Name Mann Hall

Client	Orion		Sample	As	bestos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	Fibers
M-10	30318-37	Dark Brown Cove Base Mastic Homogeneous	Chloroform	ND	4	Cellulose
M-11	30318-38	Cove Base Mastic Homogeneous	Chloroform	2 <1	Chrysotile Tremolite	Cellulose
M-12	30318-39	Cove Base Mastic Homogeneous	Chloroform	2 <1	Chrysotile Tremolite	Cellulose
M-13	30318-40	Quary Tile Homogeneous	Crush	MD	-	
M-14	30318-41	Paneling Glue Homogeneous	Chloroform	ND	18	Cellulose
M-15	30318-42	Glazing Homogeneous		ND	1.2	120
M-16a	30318-43a	Joint Compound Assoc. w/ M-16b		ND	(4)	Cellulose
M-16b	30318-43b	Wallboard Homogeneous	101	ND	42	Cellulose
M-17a	30318-44a	Joint Compound Assoc. w/ M-17b	16	ND	100	Cellulose
M-17b	30318-44b	Wallboard Homogeneous		ND	1.2	Cellulose
M-18a	30318-45a	Joint Compound Assoc. w/ M-18b	(-)	ND	0.30	Cellulose
M-18b	30318-45b	Wallboard Homogeneous	7	ND	1.5	Cellulose



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Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc. 10312 Sales Road South

Lakewood, WA 98449

Project Number Project Name 03-0325 Mann Hall Date

March 25, 2003

Page Invoice Page 3 of 4 030669

Date Received

March 18, 2003

Client	Orion		Sample	Asl	bestos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	Fibers
Л-19	30318-46	Vibration Damper Homogeneous	-	40	Chrysotile	Cellulose
1-20	30318-47	Black Caulking Homogeneous	4	ND	- 9	93
M-21	30318-48	Gray Caulking Homogeneous	-	ND	, i.e.	3.0
M-22	30318-49	Door Insulation Homogeneous	2	ND	-	1-2
M-23	30318-50	Dark Gray Grout Homogeneous	Crush	ND) ()	1 0
И-24	30318-51	Tile Adhesive Homogeneous	Chloroform	ND	+	Cellulose
∕ 1-25	30318-52	Slip Sheeting Homogeneous	Ash	ND	÷	Cellulose
`A-26	30318-53	Glazing Homogeneous	:3-	ND	4	Cellulose



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Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc.

10312 Sales Road South Lakewood, WA 98449 Date

March 26, 2003

Page

Page 1 of 1

Invoice

030744

Date Received

March 26, 2003

Project Number

03-0325

Project Name

Mann Hall

lient	Orion		Sample	Asb	estos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	Fibers
1-28a	30326-16a	Joint Compound Assoc. w/ M-28b	-	ND	8	Cellulose
1-28b	30326-16b	Wallboard Flomogeneous	+ C . II	ND	4	Cellulose
₹4-29a	30326-17a	Joint Compound Assoc. w/ M-28b	-	ND	÷	Cellulose
M-29b	30326-17Ъ	Wallboard Homogeneous	-	ND	; <u>4</u> .	Cellulose
M-30	30326-18	Off-White Vinyl Tile Homogeneous	Ash	ND	13	
1-31	30326-19	Pipe Insulation Homogeneous	< 2 -	ND	0.0	Fiberglass

Dup: Laboratory QA/QC Duplicate; M; Mastic [(a), (b), (c), etc.]: Sample layers numbered from front to back. Comments: For layered samples, each component has been analyzed separately. ND means non-detect for asbestos fibers by EPA Method 600/R-98/116.

Disclaimers: PLM has been known to miss asbestos in a small percentage of samples that contain asbestos.

Thus negative PLM results cannot be guaranteed.

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Orion samples are analyzed according to EPA Method 600/R-98/116 by AIHA Bulk Asbestos Analytical Testing Program (102911) proficient analysts.

Reviewed By

Donna McNeal

Laboratory Director

Leading Environmental Compliance Consulting Into the 21th Century

. 34004 9th Avenue South, Building A Suite 5, Federal Way, Washington 98003-6740 Telephone Scattle - (253) 874-8118 Tacoma - (253) 952-6717 Facsimile (253) 927-4714 enta" vices Other OF TO BY Envi Samples Relinquished By Use This Box For Additional Billing Information (other than listed) 8 KCKY Samples Received By Lead ANALYSIS REOUESTED Hydrocarbons BLEX MID MLbH-C POC BLEX State WTPH-HCID WPTH-D (ext.) Robert J Guiley **G-H9TW** WTPH-G Total Metals 8 KCKA Chain of Custody Seals ☐ Mailed Shipped VIA Asbestos Condition of Seals Hand
Expressed LEM (Specify) □ Yes PCM Air D N/A PLM Bulk Turnaroud Request ord ORION ID Telephone: 253-984-1818 Fax: 253-984-1881 3038 Thermatech Northwest, Inc. विजिश्विति है ory ~ Same Day 24 Hours 48 Hours 10312 Sales Road South Lakewood, WA 98499 Laboratory Work Identification Number: . In Matrix **Bob Guiley Senior** Sa Use one line per sample to be analyzed Project Name: Mann Hall Project Number: 030325 Purchase Order Number is not listed, write in specific request analysis to be performed. If analyte Place "X" in the box of the specific Check or list requested turnaround time for samples. Laboratory will rush all samples unless indicated Date Instructions (po; Client Name: Client Sample ID Attention: M-26 M-27 M-23 M-24 M-25 Address: otherwise omments

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Chain of Custody and Sampie inventory Record aboratory Work Identification Number:

34004 9th Avenue South, Building A Suite 5, Federal Way, Washington 98003-6740 Telephone Seattle - (253) 874-8118 Tacoma - (253) 952-6717 Facsimile (253) 927-4714

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Other Samples Relinquished By TCLP Use This Box For Additional Billing Information (other than listed) Samples Received By 8 KCKY read ANALYSIS REQUESTED BLEX with WTPH-G Hydrocarbons BLEX POC State WTPH-HCID WPTH-D (ext.) Robert J Guiley WTPH-D WTPH-G Total Metals 8 BCBY Chain of Custody Seals Lead I Shipped VIA Condition of Seals ☐ Expressed Asbestos TEM (Specify) M Hand □ Yes PCM Air Address **b**I'M Brijk Turnaroud Request ORION ID Fax: 253-984-1881 Thermatech Northwest, Inc. Same Day 24 Hours 48 Hours 3 Days 5 Days 7 Days 10312 Sales Road South Lakewood, WA 98499 Matrix **Bob Guiley Senior** Telephone: 253-984-1818 1. Use one line per sample to be analyzed. Project Name: Mann Hall is not listed, write in specific request. Project Number: 030325 analysis to be performed. If analyte Purchase Order Number Place "X" in the box of the specific Check or list requested turnaround time for samples. Laboratory will rush all samples unless indicated Date Client Name: Client Sample ID M-28 M-29 M-30 Attention: M-31 otherwise Address: Comments Accession:

311467

Client:

APPLIED GEOTECHNOLOGY INC

Project Number: 14340.201
Project Name: FORT LEWIS DEH/ASBESTOS
Project Location: SPOK MAIN HALL
Test: TOTAL FIBROUS ASBESTOS (%)

Matrix:

BULK

Lab Id	Sample Date	Anal Da		Client Sample Id		- 5	
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TOTAL	FIBROUS AS	BESTOS (%)	ND	ND	15	20	ND
MASTI	ROID (%) C (%) COMPONENTS	(%)	100	100	85	80	
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Remarks:

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Client requested no analysis.

Accession: Client:

311467 APPLIED GEOTECHNOLOGY INC 14340.201

Project Number: Project Name:

Project Name: FORT LEWIS DEH/ASBESTOS
Project Location: SPOK MAIN HALL
Test: TOTAL FIBROUS ASBESTOS (%)

Matrix:

BULK

Lab Id	Sample Date		Analysis Date	Client Sample Id			
021 022 023 024 025	12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93	1355 - 1355 1305	19-NOV-93 19-NOV-93 19-NOV-93 19-NOV-93 19-NOV-93	SPK R0001-06B-M SPK R0001-06C-T SPK R0001-06C-M SPK R0001-07A-T SPK R0001-07A-M			
Com	ponents	Labora	atory Id: 021	022	023	024	025
CHRYS	OTILE ASBES	ros (%)				5	15
TOTAL	FIBROUS AS	BESTOS	(%) ND	ND	ND	5	15
	COMPONENTS C (%)	(%)				95	85
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Remarks:

021	Client	requested	no	analysis.
022	Client	requested	no	analysis.
023	Client	requested	no	analysis.

Accession:

311467

Client: APPLIED GEOTECHNOLOGY INC
Project Number: 14340.201 Project Name: FORT LEWIS DEH/ASBESTOS
Project Location: SPOK MAIN HALL
Test: TOTAL FIBROUS ASBESTOS (%)

BULK
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Lab Id	Sample Date		Analysis Date	Client Sample I	d .	7 12	
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Date 11/12 (93 Page 3

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AGI OFFICES: Bellevue: (206) 453-8383 Tacoma: (206) 383-4380 Portland: (503) 222-2820 Pleasanion: (415) 460-5495

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Ap 1 Ge hnosy Geology & Hydrogeology	Inc.			
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PROJECT INFORMATION			-										
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Rev. 4/92

THERMATECH NORTHWEST, INC.

GOOD FAITH ASBESTOS SURVEY

PREPARED FOR:

TROY ALEXANDER

Centennial Contractors, Inc. PO Box 3277 Post Falls, ID 83877

LOCATION OF SURVEY:

4415 North Market Street Spokane, WA 99207



TTNW #SV030325 Report Date: March 27, 2003

PERFORMED BY:

Robert J. Guiley
AHERA Certification #03-118
Expiration Date January 17, 2004

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Basic Construct Heating & Vent Plumbing Syste Electrical Syste	tilation System em	1-2
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DEFINITIONS		8
CONCLUSIONS		9
APPENDICES: Appendix A: Appendix B: Appendix C: Appendix D:	Inspector's Certification Field Data/ Laboratory Results Sample Location Plan Specific Material Locations	

SCOPE OF WORK

On March 17, 2003 Robert J Guiley conducted a "Good Faith" asbestos survey (per U.S.E.P.A / A.H.E.R.A. guidelines as designated by *Puget Sound Air Pollution Control Agency*) of the United States Army Reserve Center, known as Mann Hall, located at 4415 North Market Street, Spokane, WA 99207. Field inspection, data collection and report generation were based on the following Scope of Work:

- Perform visual inspection to identify and inventory all accessible suspect-asbestos containing materials.
- Bulk sampling and analysis of all identified suspect asbestoscontaining materials.
- Provide written report.

The original facility was constructed In the 1950's, with an addition added in the 1970's. Since then the basement firing range in the main building has been replaced with offices. The motor pool offices have been remodeled within the last ten years. The main building is the facility headquarters with multiple classrooms, medical wing, storage areas, numerous offices and an assembly room. The motor pool has multiple offices, storage areas and vehicle service bays.

To date one other asbestos survey has been performed. AGI technologies performed an asbestos survey in 1993. Three of the confirmed samples from their survey are acknowledged in this survey.

BASIC CONSTRUCTION:

The structure is a two story, operating Army Reserve Center with basement. The exterior of the building is decorative brick over CMU building block. The roof is built-up roofing. The roof has been recently replaced. The windows are aluminum framed with single pane glass. The main lobby windows are built into a solid aluminum frame.

HEATING & VENTILATION SYSTEM:

A hot water heating system supplies heat to the building. The boiler room and piping have been abated. There may, however, be some pipe insulation in the walls. Care must be taken to watch for any pipe insulation when any destructive demolition is being done.

PLUMBING SYSTEM:

The plumbing system is a combination of galvanized and copper pipe. Some of the pipes are insulated with fiberglass.

ELECTRICAL SYSTEM:

The electrical system consists of single wire through conduit. There are several breaker boxes in the boiler room.

INTERIOR CONSRTUCTION, FINISHES & FLOORING:

The interior walls are a combination of painted building block and wallboard on metal and wood framing. The floors are covered with Vinyl tile. The floors of the second floor are hardwood. The processing room of the X-Ray department is finished with ceramic tile.

SAMPLE METHODS AND LABORATORY INFORMATION

A walk- through inspection of all areas was performed to identify which building materials may have the potential for containing asbestos.

After identifying the suspect asbestos-containing materials, bulk samples were collected, placed in plastic bags, numbered and recorded. Care was taken to clean all tools between sampling in order to avoid cross-contamination. The samples and appropriate chain of custody forms were then sent to Orion Laboratories to be analyzed for the type and content of asbestos, if any. The samples were analyzed using Polarized Light Microscopy (PLM) Stain Dispersion Technique in accordance with EPA METHOD 600/R-93/116

It must be noted that the structure surveyed is an operating military facility. Care was taken while collecting the samples to avoid being a hindrance to the operation. All areas requiring destructive sampling were sealed and encapsulated. Destructive methods were used to gain access to suspect materials, however there may be additional materials hidden in inaccessible and sensitive areas.

The following section contains tables listing all materials sampled by location, description, type, asbestos percentage (if any) category, and results of materials sampled.

ASBESTOS SAMPLE DATA

Project: 4415 North Market Street, Spokane, WA 99207

SV030325 March 27, 2003

Quantity Square Feet													
Asbestos Type/%	Chrysotile 3%	Chrysotile 2% <1% Tremolite	Chrysotile 3%	Non Detected	Chrysotile 2%	Non Detected	Non Detected	Non Detected	Chrysotile 40%	Non Detected	Chrysotile 2% <1% Tremolite	Chrysotile 2% <1% Tremolite	Non Detected
Description	Pink Tile/Mastic	Cream, Tan Tile/Mastic	Glue Dots	Ceiling Tile	Tan/Brown 12x12 Tile/Mastic	2'x4' Ceiling Panels	Dark Brown Cove Base Mastic	Brown/Tan 12x12 Tile/Mastic	Vibration Damper	Dark Brown Cove Base Mastic	Dark Brown Cove Base Mastic	Dark Brown Cove Base Mastic	Red Quarry Tile
Category	Non Friable	Non Friable	Non Friable	Friable	Non Friable	Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Non Friable	Non Friable
Location	Chaplain - 168/283	Break Area -160-170	Hall Medical Wing	Hall Medical Wing	Administration Area	Main Hall original Building	Administration Area	Equipment Room	Equipment Room	Kitchen	Training Room	Assembly Hall	Kitchen
Sample #	M-1	M-2	M-3	M-4	M-5	M-6	M-7	M-8	6-W	M-10	M-11	M-12	M-13

ASBESTOS SAMPLE DATA

Project: 4415 North Market Street, Spokane, WA 99207

SV030325 March 27, 2003

Quantity Square Feet													
Asbestos Type/%	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Chrysotile 40 %	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected
Description	Paneling Mastic	Glazing	GWB & Joint Compound	GWB & Joint Compound	GWB & Joint Compound	Vibration Damper	Black Caulking	Gray Caulking	Interior White Insulation	Dark Gray Grout	Tile Adhesive	Slip Sheet Between Floors	Glazing
Category	Non Friable	Non Friable	Non Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Non Friable	Non Friable
Location	Assembly Hall	Mezzanine Windows	Training Room	Administration Area	Medical Area	Assembly Hall	Exterior Training Room Window	Exterior Training Room Window	West Exit Door	X-Ray Processing Room	X-Ray Processing Room	2nd Floor Supply Room	2nd Floor Men's Restroom
Sample #	M-14	M-15	M-16	M-17	M-18	M-19	M-20	M-21	M-22	M-23	M-24	M-25	M-26

ASBESTOS SAMPLE DATA

Project: 4415 North Market Street, Spokane, WA 99207

SV030325 March 27, 2003

Quantity Square Feet								
Asbestos Type/%	Non Detected	Non Detected	Non Detected	Non Detected	Non Detected	Chrysotile 15 % Chrysotile 20 %	Chrysotile 5% Chrysotile 15%	Chrysotile 3% Chrysotile 15%
Description	Pipe Insulation	GWB & Joint Compound	GWB & Joint Compound	Off White 12x12 Tile	Pipe Insulation	Brown/White/Red Tile & Mastic	Black Tile & Mastic	Off White/brown Tile & Mastic
Category	Friable	Non Friable	Non Friable	Non Friable	Friable	Non Friable	Non Friable	Non Friable
Location	Main Shop	Motor Pool Oil Storage Area	Motor Pool Battery Storage Area	Motor Pool Offices & Rest Rooms	Boiler Room	R001-06 Offices, Classroom, Equipment Room. Janitor Closet	R001-07 X-ray & Hearing Test Room	Medical Area
Sample #	M-27	M-28	M-29	M-30	M-31	R001-06	R001-07	R001-08

SUMMARY OF MATERIALS FOUND POSITIVE

Upon completion of the survey and review of the laboratory data, the following materials found contained asbestos at the structures located at, 4415 North Market Street, Spokane, WA 99207.

- The brown-white-red 9x9 tile and mastic located in the offices, classroom, back portion of the equipment room and the janitor's closet in the hall of the main facility. (Sample #R001-06). (See Appendix D).
- The black tile & mastic located in the X-Ray room and the hearing test room of the medical wing. (Sample #R001-07). (See Appendix D).
- The off-white/brown tile & mastic located in the medical wing. (Sample #R001-08). (See Appendix D).
- The black mastic associated with the pink tile in the Chaplain's office. (Sample #M-1). (See Appendix D).
- The dark brown glue dots associated with the 12x12 ceiling tile located in the medical wing and west-portion of the main hall.
 There is also a small area in the hall to the stair descending to the basement. (Sample #M-3).
- The vibration dampers associated with the ventilation systems located in the assembly hall and the equipment room. (Sample #M-9, M-19).
- The dark brown cove base mastic located throughout the facility. (Sample #M-11, M-12).
- The black mastic associated with the tan-brown tile located in the administration area. (Sample M-5). (See Appendix D).
- No asbestos was found in the motor pool.

DEFINITIONS

Asbestos means the asbestiform varieties of actinolite, amosite (cummingtonitegrunerite), tremolite, chrysotile (serpentinite), crocidolite (riebeckite), or anthophyllite.

Asbestos-Containing Material means any material containing more than one percent (1%) asbestos as determined using the method specified in EOA regulations (Polarized Light Microscopy).

Friable – materials that can be crumbled or reduced to powder by hand pressure.

Homogeneous Areas – an area which appears similar throughout in terms of color, texture, and date of materials application.

Miscellaneous Materials – interior building material on structural components, structural members of fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation (AHERA definition).

Surfacing Material — material that is sprayed-on, troweled- on, or otherwise applied to surfaces, such as acoustical plaster on ceilings, and fireproofing materials on structural members, or other materials o n surfaces for acoustical, fireproofing, or other purposes (AHERA definition).

Thermal System Insulation – means material applied to pipes, fittings, boilers, breeching, tanks, ducts or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.

CONCLUSION

Abatement and disposal of asbestos-containing materials must be conducted by a Washington State Licensed Asbestos Abatement Contractor using Washington State Certified Asbestos Abatement Workers. Should employees or contract personnel encounter any suspect asbestos-containing materials, it is their responsibility to:

- · Contact a representative of the owners.
- Consult the inspection report to determine whether or not the suspect material contains asbestos.
- Ensure that all employees and contractors are informed and advised of the location and type of materials that contain asbestos

Any additional hidden or covered suspect materials, discovered during demolition or renovation, that are similar to those identified in this survey must be treated as asbestos-containing materials unless determined otherwise by laboratory analysis.

A copy of this report should be kept on site during any asbestos abatement, renovation, or demolition.

Please contact the undersigned for any further assistance or if any questions or concerns arise relative to this report.

Sincerely,

Robert Guiley

AHERA Building Inspector

Appendix #A

INSPECTOR'S CERTIFICATION

Certificate of Completion

Robert J. Guiley This is to certify that

4 hours of refresher training as a has satisfactorily completed

Building Inspector

in compliance with TSCA Title II AHERA Accredited State of Missouri Training Provider # MO 00-10-025



Exam Date: January 17, 2003

Cert. # 03-118 Conducted at:

Prezant Associates, Inc. Seattle, WA

Exp. Date: January 17, 2004

nstructor: Robert Welch

Web 30 let

Prezant Associates, Inc. • 330 Sixth Avenue North, Suite 200 • Seattle, Washington 98109 • (206) 281-8858

FIELD DATA / LABORATORY RESULTS

THERMATECH NORTHWEST INC.

1711 6TH ST S.W. Puyallup, WA 98371

PH: 253-984-1818 FAX: 253-984-1886

DATE: 3/17/2003 CLIENT: Troy Alexander

ADDRESS: Centennial Contractors Ent. Inc.

PO Box 3277

Post Falls, Idaho 83877

FIELD DATA SUMMARY

TTNW JOB#:BSSV030325 INSPECTOR: BOB GUILEY

SITE: NAME ADDRESS;

Mann Hall

4415 North Market Street Spokane, WA 99207-5830

SAMPLE NO.	FLOOR	LOCATION	DESCRIPTION OF MATERIAL
M-1	1	Chaplin - 168/283	Pink Tile/Mastic
M-2	1	Break Area -160-170	Cream,Tan Tile/Mastic
M-3	1	Hall Medical Wing	Glue Dots
M-4	1	Hall Medical Wing	Ceiling Tile
M-5	1	Administration Area	Tan/Brown 12x12 Tile/Mastic
M-6	1	Main Hall original Building	2'x4' Ceiling Panels
M-7	1	Administration Area	Dark Brown Cove Base Mastic
M-8	1	Equipment Room	Brown/Tan 12x12 Tile/Mastic
M-9	1	Equipment Room	Vibration Damper
M-10	1	Kitchen	Dark Brown Cove Base Mastic
M-11	1	Training Room	Dark Brown Cove Base Mastic
M-12	1	Assembly Hall	Dark Brown Cove Base Mastic
M-13	1	Kitchen	Red Quarry Tile
M-14	1	Assembly Hall	Paneling Mastic
M-15	Exterior	Mezzanine Windows	Glazing
M-16	1	Training Room	GWB & Joint Compound
M-17	1	Administration Area	GWB & Joint Compound
M-18	1	Medical Area	GWB & Joint Compound
M-19	Mezz	Assembly Hall	Vibration Damper
M-20	Exterior	Exterior Training Room Window	Black Caulking
M-21	Exterior	Exterior Training Room Window	Gray Caulking
M-22	Door	West Exit Door	Interior White Insulation
M-23	1	X-Ray Processing Room	Dark Gray Grout
M-24	1	X-Ray Processing Room	Tile Adhesive
M-25	2	2nd Floor Supply Room	Slip Sheet Between Floors
M-26	2	2nd Floor Men's Restroom	Glazing
M-27	Shop	Main Shop	Pipe Insulation
M-28	Shop	Motor Pool Oil Storage Area	GWB & Joint Compound
M-29	Shop	Motor Pool Battery Storage Area	GWB & Joint Compound
M-30	Shop	Mpotr Pool Offices & Rest Rooms	Off White 12x12 Tile
M-31	1	Boiler Room	Pipe Insulation
R001-06	1	Offices, Classroom, Eqip. Rm. Jan Cl	Brown/White/Red Tile & Mastic
R001-07	1	X-ray & Hearing Test Room	Black Tile & Mastic
R001-08	1	Medical Area	Off White/brown Tile & Mastic



Orion Environmental Services

NBE W2F5912535

34004 9th Avenue South & Building A Suite 5 & Federal Way, Washington 98003-6740
Telephone Seattle (253) 874-8118 & Tacoma (253) 952-6717 & Facsimile (253) 927-4714 & email ORION6717@aol

Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc.

10312 Sales Road South Lakewood, WA 98449

Invoice Date Received

Date

Page

March 25, 2003

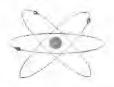
Page 1 of 4

030669 March 18, 2003

Project Number Project Name 03-0325

Mann Hall

Client	Orion		Sample	As	bestos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	<u>Fibers</u>
M-01a	30318-28a	Pink Vinyl Tile Homogeneous	Ash	ND	~	ê
M-01b	30318-28b	Mastic Assoc. w/ M-01a	Chloroform	3	Chrysotile	Cellulose
M-02a	30318-29a	Cream Vinyl Tile Homogeneous	Ash	ND	O.	-
M-02b	30318-29b	Mastic Assoc. w/ M-02a	Chloroform	ND	4	Cellulose
M-03	30318-30	Glue Dots Homogeneous	Chloroform	2 <1	Chrysotile Tremolite	Cellulose
M-04	30318-31	Ceiling Tile Homogeneous	Ash	ND	*	Cellulose Fiberglass
M-05a	30318-32a	Tan / Brown Vinyl Tile Homogeneous	Ash	ND	o š o	-
M-05b	30318-32b	Mastic Assoc. w/ M-05a	Chloroform	2	Chrysotile	Cellulose
M-06	30318-33	Ceiling Panel Homogeneous	Ash	ND	3	Cellulose
M-07	30318-34	Cove Base Mastic Homogeneous	Chloroform	ND		Cellulose
M-08a	30318-35a	Brown / Tan Vinyl Tile Homogeneous	Ash	ND	c	.=
M-08b	30318-35b	Mastic Assoc. w/ M-08a	Chloroform	ND	.12	Cellulose
M-09	30318-36	Vibration Damper Homogeneous	1.0	40	Chrysotile	Cellulose



rion Environmental Services

VBE W2F5912535

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Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc.

10312 Sales Road South Lakewood, WA 98449

Date Page Invoice March 25, 2003

Page 2 of 4 030669

Date Received

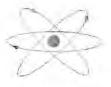
March 18, 2003

Project Number

03-0325

Project Name Mann Hall

Client	Orion		Sample	As	bestos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	Fibers
M-10	30318-37	Dark Brown Cove Base Mastic Homogeneous	Chloroform	ND	4	Cellulose
M-11	30318-38	Cove Base Mastic Homogeneous	Chloroform	2 <1	Chrysotile Tremolite	Cellulose
M-12	30318-39	Cove Base Mastic Homogeneous	Chloroform	2 <1	Chrysotile Tremolite	Cellulose
M-13	30318-40	Quary Tile Homogeneous	Crush	MD	-	
M-14	30318-41	Paneling Glue Homogeneous	Chloroform	ND	18	Cellulose
M-15	30318-42	Glazing Homogeneous		ND	1.2	120
M-16a	30318-43a	Joint Compound Assoc. w/ M-16b		ND	(4)	Cellulose
M-16b	30318-43b	Wallboard Homogeneous	101	ND	42	Cellulose
M-17a	30318-44a	Joint Compound Assoc. w/ M-17b	16	ND	100	Cellulose
M-17b	30318-44b	Wallboard Homogeneous		ND	1.2	Cellulose
M-18a	30318-45a	Joint Compound Assoc. w/ M-18b	(-)	ND	0.30	Cellulose
M-18b	30318-45b	Wallboard Homogeneous	7	ND	1.5	Cellulose



Orion Environmental Services

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Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc. 10312 Sales Road South

Lakewood, WA 98449

Project Number Project Name 03-0325 Mann Hall Date

March 25, 2003

Page Invoice Page 3 of 4 030669

Date Received

March 18, 2003

Client	Orion		Sample	Asl	bestos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	Fibers
Л-19	30318-46	Vibration Damper Homogeneous	-	40	Chrysotile	Cellulose
1-20	30318-47	Black Caulking Homogeneous	4	ND	- 9	93
M-21	30318-48	Gray Caulking Homogeneous	-	ND	, i.e.	3.0
M-22	30318-49	Door Insulation Homogeneous	2	ND		1-2
M-23	30318-50	Dark Gray Grout Homogeneous	Crush	ND) ()	1 0
И-24	30318-51	Tile Adhesive Homogeneous	Chloroform	ND	+	Cellulose
∕ 1-25	30318-52	Slip Sheeting Homogeneous	Ash	ND	÷	Cellulose
`A-26	30318-53	Glazing Homogeneous	:3-	ND	4	Cellulose



rion Environmental Services

BE W2F5912535

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Polarized Light Microscopy Test Report EPA Method 600/R-98/116

Client

Thermatech Northwest Inc.

10312 Sales Road South Lakewood, WA 98449

Date

March 26, 2003

Page Invoice Page 1 of 1 030744

Date Received

March 26, 2003

Project Number Project Name

03-0325

Mann Hall

lient	Orion		Sample	Asb	estos	Other
Number	Number	Stereo Scope Exam	Treatment	Percent	Type	Fibers
1-28a	30326-16a	Joint Compound Assoc. w/ M-28b	-	ND	8	Cellulose
1-28b	30326-16b	Wallboard Flomogeneous	+ C . II	ND	4	Cellulose
₹4-29a	30326-17a	Joint Compound Assoc. w/ M-28b	-	ND	÷	Cellulose
M-29b	30326-17Ъ	Wallboard Homogeneous	-	ND	; <u>4</u> .	Cellulose
M-30	30326-18	Off-White Vinyl Tile Homogeneous	Ash	ND	13	
1-31	30326-19	Pipe Insulation Homogeneous		ND	Og II	Fiberglass

Dup: Laboratory QA/QC Duplicate; M; Mastic [(a), (b), (c), etc.]: Sample layers numbered from front to back. Comments: For layered samples, each component has been analyzed separately. ND means non-detect for asbestos fibers by EPA Method 600/R-98/116.

Disclaimers: PLM has been known to miss asbestos in a small percentage of samples that contain asbestos.

Thus negative PLM results cannot be guaranteed.

This report may only be reproduced in full with written approval of ORION Environmental Services. Orion samples are analyzed according to EPA Method 600/R-98/116 by A1HA Bulk Asbestos Analytical Testing

Program (102911) proficient analysts.

Reviewed By

Laboratory Director

Leading Environmental Compliance Consulting Into the 21th Century

. 34004 9th Avenue South, Building A Suite 5, Federal Way, Washington 98003-6740 Telephone Scattle - (253) 874-8118 Tacoma - (253) 952-6717 Facsimile (253) 927-4714 enta" vices Other OF TO BY Envi Samples Relinquished By Use This Box For Additional Billing Information (other than listed) 8 KCKY Samples Received By Lead ANALYSIS REOUESTED Hydrocarbons BLEX MID MLbH-C POC BLEX State WTPH-HCID WPTH-D (ext.) Robert J Guiley **G-H9TW** WTPH-G Total Metals 8 KCKA Chain of Custody Seals ☐ Mailed Shipped VIA Asbestos Condition of Seals Hand
Expressed LEM (Specify) □ Yes PCM Air D N/A PLM Bulk Turnaroud Request ord ORION ID Telephone: 253-984-1818 Fax: 253-984-1881 3038 Thermatech Northwest, Inc. विजिश्विति है ory ~ Same Day 24 Hours 48 Hours 10312 Sales Road South Lakewood, WA 98499 Laboratory Work Identification Number: . In Matrix **Bob Guiley Senior** Sa Use one line per sample to be analyzed Project Name: Mann Hall Project Number: 030325 Purchase Order Number is not listed, write in specific request analysis to be performed. If analyte Place "X" in the box of the specific Check or list requested turnaround time for samples. Laboratory will rush all samples unless indicated Date Instructions (po; Client Name: Client Sample ID Attention: M-26 M-27 M-23 M-24 M-25 Address: otherwise omments

ri

Chain of Custody and Sampie inventory Record aboratory Work Identification Number:

34004 9th Avenue South, Building A Suite 5, Federal Way, Washington 98003-6740 Telephone Seattle - (253) 874-8118 Tacoma - (253) 952-6717 Facsimile (253) 927-4714

nvir :ntal

10

Other Samples Relinquished By TCLP Use This Box For Additional Billing Information (other than listed) Samples Received By 8 KCKY read ANALYSIS REQUESTED BLEX with WTPH-G Hydrocarbons BLEX POC State WTPH-HCID WPTH-D (ext.) Robert J Guiley WTPH-D WTPH-G Total Metals 8 BCBY Chain of Custody Seals Lead I Shipped VIA Condition of Seals ☐ Expressed Asbestos TEM (Specify) M Hand □ Yes PCM Air Address **b**I'M Brijk Turnaroud Request ORION ID Fax: 253-984-1881 Thermatech Northwest, Inc. Same Day 24 Hours 48 Hours 3 Days 5 Days 7 Days 10312 Sales Road South Lakewood, WA 98499 Matrix **Bob Guiley Senior** Telephone: 253-984-1818 1. Use one line per sample to be analyzed. Project Name: Mann Hall is not listed, write in specific request. Project Number: 030325 analysis to be performed. If analyte Purchase Order Number Place "X" in the box of the specific Check or list requested turnaround time for samples. Laboratory will rush all samples unless indicated Date Client Name: Client Sample ID M-28 M-29 M-30 Attention: M-31 otherwise Address: Comments Accession:

311467

BULK

Client:

APPLIED GEOTECHNOLOGY INC

Project Number: 14340.201
Project Name: FORT LEWIS DEH/ASBESTOS
Project Location: SPOK MAIN HALL
Test: TOTAL FIBROUS ASBESTOS (%)

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Matrix:	
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Com	ponents 1	Laboratory Id: 0	16	017	018	019	020
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Remarks:

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Client requested no analysis.

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Accession:

Client:

311467 APPLIED GEOTECHNOLOGY INC 14340.201

Project Number: Project Name:

Matrix:

Project Name: FORT LEWIS DEH/ASBESTOS
Project Location: SPOK MAIN HALL
Test: TOTAL FIBROUS ASBESTOS (%) BULK

Lab Id	Sample Date		lysis ate	Client Sample I		w
021 022 023 024 025	12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93	1355 - 19- 1355 - 19- 1305 - 19-	NOV-93 NOV-93 NOV-93 NOV-93	SPK R0001-06B-M SPK R0001-06C-T SPK R0001-06C-M SPK R0001-07A-T SPK R0001-07A-M	1	i. M
	ponents	Laboratory	Id: 021	022	023	
	OTILE ASBEST		ND	ND	ND	

D	OTT	-	-	10	•	

SAMPLE COLOR.

UNIFORMITY

021	Client	requested	no	analysis.
022	Client	requested	no	analysis.
023	Client	requested	no	analysis.

Accession:

311467

Client: APPLIED GEOTECHNOLOGY INC
Project Number: 14340.201 Project Name: FORT LEWIS DEH/ASBESTOS
Project Location: SPOK MAIN HALL
Test: TOTAL FIBROUS ASBESTOS (%)

BULK
į

Lab Id	Sample Date		Analysis Date	Client Sample Id	F.	7.00	
026 027 028 029 030	12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93 12-NOV-93	1310 - 1450 1450	19-NOV-93 19-NOV-93 19-NOV-93 19-NOV-93	SPK R0001-07B-T SPK R0001-07B-M SPK R0001-08A-T SPK R0001-08A-M SPK R0001-08B-T			
Com	ponents	Labor	atory Id: 026	027	028	029	030
CHRYS	OTILE ASBES	TOS (%)			3	15	
TOTAL	FIBROUS AS	BESTOS	(%) ND	ND	3	15	ND
TILE MASTI	COMPONENTS C (%)	(%)			97	85	
UNIFO SAMPL	RMITY E COLOR.				U T	U B	

Jan 40

Remarks:

026	Client	requested	no	analysis.
027	Client	requested	no	analysis.
030	Client	requested	no	analysis.

nc. Ap Geotechnical Engineering Geology & Hydrogeology

WAIN JF-CTCV.

Date 11/12 (93 Page 3

PROJECT INFORMATION	VIION	Lal	Laboratory Number:	ımber:							
Project Manager: 5. Ru UYNIN	NOW			Control of the contro	ANA	ANALYSIS REQUEST	DUEST				
1984)	ENIS DENIA	* 1885 F	PETROLEUM	ORGANIC COMPOUNDS	-	PESTS/PCB's	METALS	s	LEACHING	отнея	
Site Location: Stock Mountly	MANN KALSampled By:	MART	418.1 TPH 5 TPH-0	8310 8270 8240 8020 8020 8010	8080 DWS 8040	8150 8140 8080N	TCL N Organ Total I Select	DWS Priorit	TCLP	(30	NUME
DISPOSAL INFORMATION	ATION		Sta Speci	GCM GCM M - Bi Arom Halo	OC F	OC H	Metal: nic Le Lead	- Met	- Pe - Se - Vo	اررا	BER
☐ Lab Disposal (return if not indicated)	jcated)		ial In: tate:	S PA IS Se IS Vo	est/f	lerbio estic	s (23 ead (0 (Wa	tals	sticid mivol	K	OF C
Disposal Method:			struc	only VOC	PCB	cide:) - Ca))		latile s (Zl	P-	ON
Disposed by: Disposal Date:	al Date:		ctions	es Cs	_				HE)		TAIN
QC INFORMATION (Check one)	ack one)		3	S	nivol					458	ERS
□SW-846 □CLP □Screening □	☐AGI Std. ☐Special	cial								E57	
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Tacoma: (206) 383-4380 Pleasanton: (415) 460-5495 AGI OFFICES: Bellevue: (206) 453-8383 Portland: (503) 222-2820

DISTRIBUTION: White, Canary to Analytical Laboratory; Pink to AGI Project Files; Gold to AGI Disposal Files

Rev. 4/92

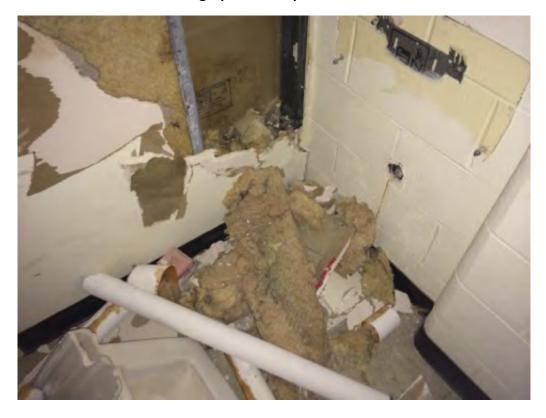
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APPENDIX B
Photograph Log



Photograph 1 – Sample WA021-01



Photograph 2 – Sample WA032-02



Photograph 3 – Sample WA032-03



Photograph 4 – Thermal System Insulation (Assumed ACM)



Photograph 5 – Thermal System Insulation (Assumed ACM)

APPENDIX C
Inspector's Certification



Environmental Management Institute

5610 Crawfordsville Rd # 1500, Indianapolis, Indiana 46224-3787

317/248-4848 • 800/488-8842 • FAX 317/248-4846 www.envmgt.org

This confirms that

Craig A Coombs

Completed the Required Refresher Training for
Asbestos Accreditation Under TSCA Title II
and has
passed with a Score of 70 or Greater the Examination for

Asbestos Building Inspector

Course Date November 21, 2013

Examination Date

November 21, 21

Jack E. Leonard, President

Certificate: IN(R) 7466

Expires: November 21, 2014

Approved by::

Illinois Department of Public Health

Indiana Department of Environmental Management

APPENDIX D

Bulk Sample Log

Table 1
Bulk Sample Log
WA032 PFC Joe E. Mann USARC, Spokane, Washington

НА	Sample No.	Date	Material Description	Bldg. ¹	Estimated Quantity	Condition ²	Friable/ Non-Friable	Analytical Result (% asb.)
	SPK-R0001-01 A SPK-R0001-01 B SPK-R0001-01 C SPK-R0001-01 D SPK-R0001-01 E	11/10/93	White 12" x 12" Ceiling Tile	1	6995 sf	Damaged	NR	ND
	SPK-R0001-02 A-M SPK-R0001-02 A-T SPK-R0001-02 B-M SPK-R0001-02 B-T SPK-R0001-02 C-M SPK-R0001-02 C-T	11/10/93	White 12" x 12" Floor Tile with tan mastic	1	1710	Good	Non-Friable	<1% ³
	SPK-R0001-03 A-M SPK-R0001-03 A-T SPK-R0001-03 B-M SPK-R0001-03 B-T SPK-R0001-03 C-M SPK-R0001-03 C-T	11/10/93	Brown-red cove base with brown mastic	1	4000	Good	Non-Friable	<1%
	SPK-R0001-04 A-M SPK-R0001-04 A-T SPK-R0001-04 B-M SPK-R0001-04 B-T SPK-R0001-04 C-M SPK-R0001-04 C-T	11/10/93	Black cove base with brown mastic	1	7000 lf	Good	Non-Friable	ND
	SPK-R0001-05 A-M SPK-R0001-05 A-T SPK-R0001-05 B-M SPK-R0001-05 B-T SPK-R0001-05 C-M SPK-R0001-05 C-T	11/10/93	Green cove base with tan mastic	1	176 lf	Good	Non-Friable	ND
	SPK-R0001-06 A-M SPK-R0001-06 A-T SPK-R0001-06 B-M SPK-R0001-06 B-T SPK-R0001-06 C-M SPK-R0001-06 C-T	11/10/93	Brown 9"x9" floor tile (90% brown, 5% red, 5% white) with black mastic	1	1350 sf	Good	Non-Friable	20%
	SPK-R0001-07 A-M SPK-R0001-07 A-T SPK-R0001-07 B-M SPK-R0001-07 B-T SPK-R0001-07 C-M SPK-R0001-07 C-T	11/10/93	Black 12"x12" floor tile with black mastic	1	220 sf	Good	Non-Friable	15%
	SPK-R001-08 A-M SPK-R001-08 A-T SPK-R001-08 B-M SPK-R001-08 B-T SPK-R001-08 C-M SPK-R001-08 C-T	11/10/93	Off-white 12"x12" floor tile (90% off-white, 10% brown) with black mastic	1	5300 sf	Good	Non-Friable	15%
	M-1	03/27/03	Pink Tile/Mastic	1	NR	Good	Non-Friable	3%
	M-2	03/27/03	Cream, Tan Tile/Mastic	1	NR	Good	Non-Friable	2%
	M-3	03/27/03	Glue Dots	1	NR	Good	Non-Friable	3%
	M-4	03/27/03	Ceiling Tile	1	NR	Damaged	Friable	ND

Table 1
Bulk Sample Log
WA032 PFC Joe E. Mann USARC, Spokane, Washington

НА	Sample No.	Date	Material Description	Bldg. ¹	Estimated Quantity	Condition ²	Friable/ Non-Friable	Analytical Result (% asb.)
	M-5	03/27/03	Tan/Brown 12x12 Tile/Mastic	1	NR	Good	Non-Friable	2%
	M-6	03/27/03	2'x4' Celing Panels	1	NR	Damaged	Friable	ND
	M-7	03/27/03	Dark Brown Cove Base Mastic	1	NR	Good	Non-Friable	ND
	M-8	03/27/03	Brown/Tan 12x12 Tile/Mastic	1	NR	Good	Non-Friable	ND
	M-9	03/27/03	Vibration Damper (Equipment Room)	1	1 ea	Good	Friable	40%
	M-10	03/27/03	Dark Brown Cove Base Mastic (Kitchen)	1	NR	Good	Non-Friable	ND
	M-11	03/27/03	Dark Brown Cove Base Mastic (Training Room)	1	NR	Good	Non-Friable	2%
	M-12	03/27/03	Dark Brown Cove Base Mastic (Assembly Hall)	1	NR	Good	Non-Friable	2%
	M-13	03/27/03	Red Quarry Tile	1	NR	Good	Non-Friable	ND
	M-14	03/27/03	Paneling Mastic	1	NR	Good	Non-Friable	ND
	M-15	03/27/03	Glazing (mezzanine windows)	1	NR	Good	Non-Friable	ND
	M-16	03/27/03	GWB & Joint Compound (Training Room)	1	NR	Damaged	Non-Friable	ND
	M-17	03/27/03	GWB & Joint Compound (Adminsitration Area)	1	NR	Damaged	Non-Friable	ND
	M-18	03/27/03	GWB & Joint Compound (Medical Area)	1	NR	Damaged	Non-Friable	ND
	M-19	03/27/03	Vibration Damper (Assembly Hall)	1	1 ea	Good	Friable	40%
	M-20	03/27/03	Black Caulking	1	NR	Good	Non-Friable	ND
	M-21	03/27/03	Gray Caulking	1	NR	Good	Non-Friable	ND
	M-22	03/27/03	Interior White Insulation (west exit door)	1	NR	Good	Friable	ND
	M-23	03/27/03	Dark Gray Grout	1	NR	Good	Non-Friable	ND
	M-24	03/27/03	Tile Adhesive	1	NR	Good	Non-Friable	ND
	M-25	03/27/03	Slip Sheet between floors	1	NR	Good	Non-Friable	ND
	M-26	03/27/03	Glazing (2nd floor men's restroom)	1	NR	Good	Non-Friable	ND
	M-27	03/27/03	Pipe Insulation	2	NR	Good	Friable	ND
	M-28	03/27/03	GWB & Joint Compound (Oil Storage Area)	2	NR	Good	Non-Friable	ND
	M-29	03/27/03	GWB & Joint Compound (Battery Storage Area)	2	NR	Good	Non-Friable	ND
	M-30	03/27/03	Off white 12x12 Tile	2	NR	Good	Non-Friable	ND
	M-31	03/27/03	Pipe Insulation (Boiler Room)	1	NR	Good	Friable	ND
	WA032-01 WA032-02 WA032-03	01/22/14	Off-White Wall Insulation from medical wing	1	NR	Damaged	Friable	ND

¹ 91001 = Admin, 91002 = Maintenance Building

From 1994 Report Occurrence of black mastic (which may be ACM) attached to tan mastic may be wide spread and more concentrated, so this was assumed to be ³ an ACM. Since sample was not point counted this is still considered an ACM.

NR - not reported

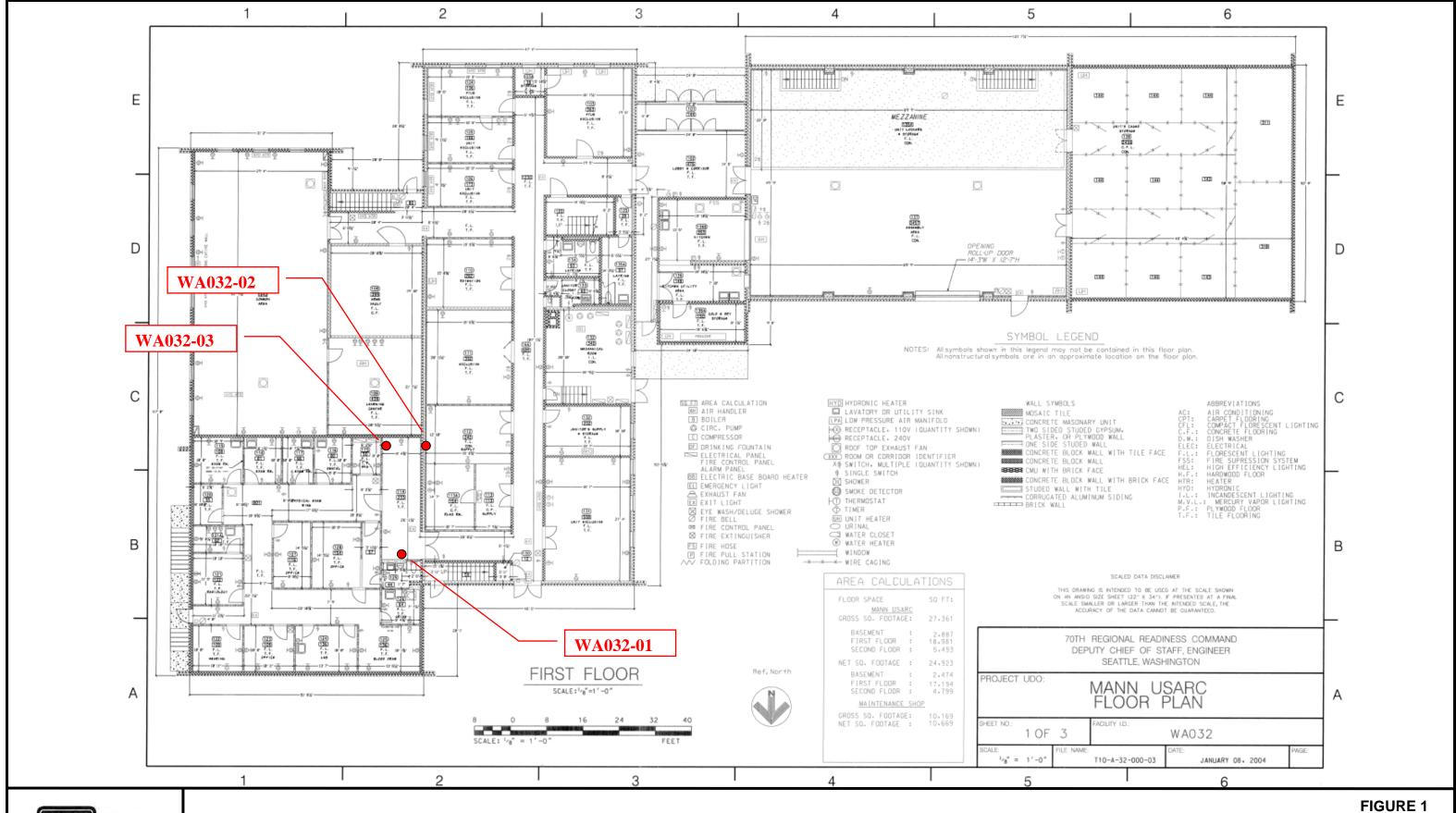
ND - none detected

Red Text inicates a confirmed ACM

² Refer to Section 4.1 of report for Condition descriptions, as observed during 2014 inspection

APPENDIX E

Functional Space and Homogenous Area Forms
Sample Location Diagrams



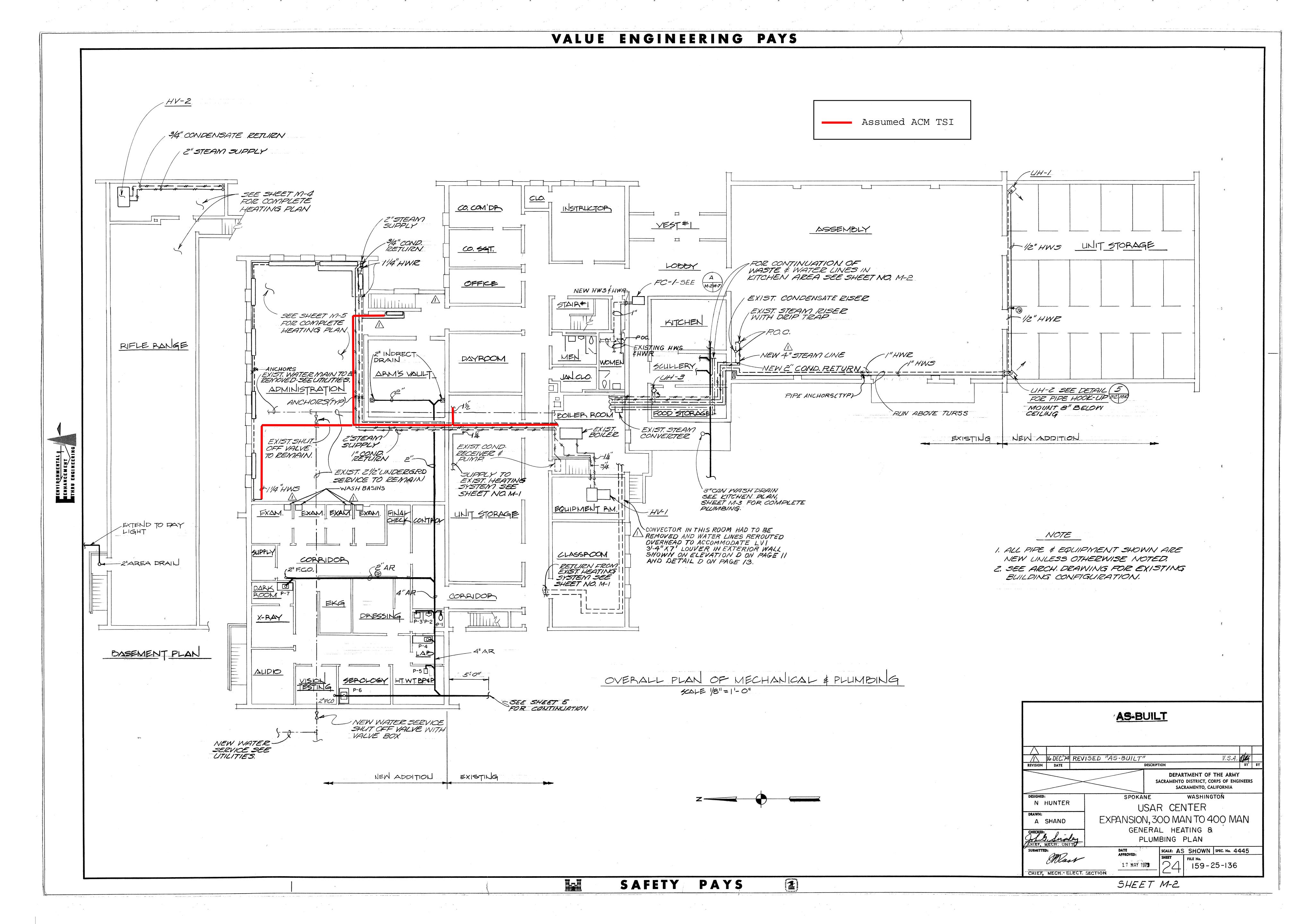
US Army Corps

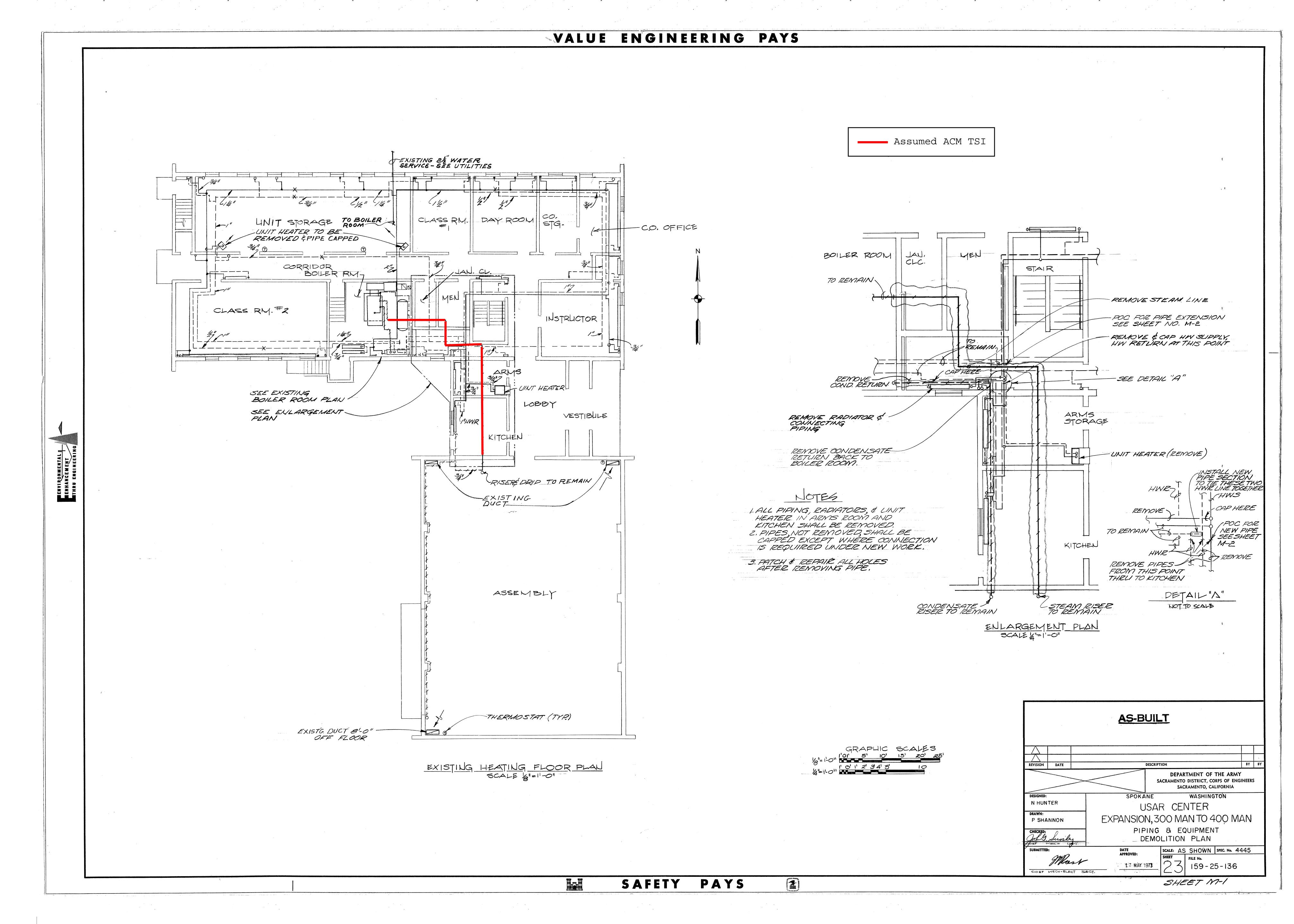
Louisville District

of Engineers

FIGURE 1 Asbestos Sample Locations

PFC Joe E. Mann United States Army Reserve Center 4415 North Market Street Spokane, Washington 99207





APPENDIX F

Laboratory Bulk Asbestos Analysis Reports
Chain-of-Custody Forms

United States Department of Commerce National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101895-0

McCall and Spero Environmental, Inc.

Louisville, KY

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

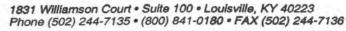
2013-07-01 through 2014-06-30

Effective dates



Man K. Mall

For the National Institute of Standards and Technology





E-mail: customerservice@mselabs.com • Website: www.mselabs.com

Date: February 3, 2014

Attention: Craig Coombs

USACE

Subject: Analysis of bulk samples for asbestos mineral fibers by Polarized Light

Microscopy (PLM) with Dispersion Staining (EPA/600/R-93/116)

RE: MSE-P1314USC

Mann USARC Asbestos Inspection Project

USC# 442919

Dear Mr. Coombs:

McCall & Spero Environmental, Inc. has completed the analyses of the bulk samples we received from your offices on January 31, 2014. These samples represent the bulk samples from the Mann USARC Asbestos Inspection Project.

The PLM bulk analysis was performed according to the "Method of the Determination of Asbestos in Bulk Building Materials", R. L. Perkins and B. W. Harvey (EPA/600/R-93/116).

The results for the three (3) samples are summarized in the following report. Please note that for samples consisting of two or more distinct components, each component is analyzed and reported individually (EPA 40 CFR Part 61 [FRL-4821-71]).

Thank you for consulting McCall & Spero Environmental, Inc. Should you have any questions concerning these results, please contact our office.

Sincerely,

J. Scott Board, B.S.

Laboratory Director



SUMMARY OF PLM BULK ANALYSIS RESULTS

Page 1

Project Name: Mann USARC Asbestos Inspection Project USC# 442919

McCall & Spero Environmental Project No. MSE-P1314USC

MSE # P1314USC-	SAMPLE # DESCRIPTION	ASBESTOS TYPE & %	OTHER FIBROUS MATERIAL & %	% NON-FIBROUS MATERIAL	COLOR
001	WA032-01 Insulation	ND	Glass / 98%	2%	Yellow
002	WA032-02 Insulation	ND	Glass / 98%	2%	Yellow
003	WA032-03 Insulation	ND	Glass / 98%	2%	Yellow

NOTES:

ND = None Detected CH = Chrysotile A = Amosite AC = Actinolite

CR = Crocidolite AN = Anthophyllite TR = Tremolite

For samples consisting of separate components, each component is analyzed and reported separately.

Results apply only to items tested. Quantification is accurate to within \pm 10%. Results from this report must not be reproduced, except in full, with the approval of McCall & Spero Environmental, Inc. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

** EPA recommends that bulk materials found negative for asbestos or less than one percent asbestos by polarized light microscopy that fall into one of five dominantly nonfriable categories be reanalyzed by an additional method, such as transmission electron microscopy. (EPA Notice of Advisory, FR Vol. 59, No. 146 & Test Method EPA 600/ R-93/116).

Analyst: J. Scott Board, B.S.



1831 Williamson Court • Suite 100 • Louisville, KY 40223 Phone (502) 244-7135 • (800) 841-0180 • FAX (502) 244-7136

E-mail: customerservice@mselabs.com • Website: www.mselabs.com

BULK SAMPLE CHAIN OF CUSTODY FORM

Company:	SACE Telephone #	502-315-6324 Fax#: 502-315-	6309									
Contact: C	RAIG COOMBS											
Relinquished by: C.Z.P.I.G. C.COMBS Date: Time:												
Written Report To: CRAIG COOMS EMAIL: CRAIG, A. GOORS @ USACE, ARMY, MIL												
	MANN USARC ASBESTO IN											
	Circle One): Same Day 24 Hour 2-3		ter Hour Rush									
Analysis Reque	sted (Circle One): PLM Bulk Analysis	TEM Qualitative Analysis TEM Quantitative An	alysis (4-5 Day)									
For Laboratory	Use Only											
MSE Project # Samples Receiv		Method: EPA/600/R-93/116 Date: //// Time: /	0:00									
Client Sample		/										
Number	Location	Sample Description	Sampled By									
WA032-01	HALLWAY	OFF - WHITE WALL INSULATION	CoomBS									
WA032-02	DENTAL/PHARMACY	OFF - WHITE WALL INSULATION	COOMBS									
WA032-03	PAD/TEIAGE / PEE-OP	OFF - WHITE WALL INSULATION	COOMBS									